Apple-Works Forum

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Support for AppleWorks and ///EZ Pieces Users

Letters to NAUG

Can't Configure AppleWorks 3.0

Dear Cathleen,

I have an Apple IIe with a 1-megabyte RamWorks memory expansion card, so I was pleased to see your article in the October 1989 issue that described how to get all of AppleWorks 3.0 on one 5.25-inch disk. Unfortunately, my attempts were met with frustration. I could copy the files, but the disks would not run. What am I doing wrong?

Roger DuClos
Sleepy Hollow, Illinois

[Ed: Roger, you're not the only one having difficulty configuring your customized version of AppleWorks 3.0 on 5.25-inch disks. Here are the typical problems:

1. *Since you have more than 256K of RAM, you probably configured your disk to match Figure 2 on Page 5 of the October issue of the **AppleWorks Forum**. That figure omits the file SEG.ER from Side One of the disk, and AppleWorks will not load unless it finds SEG.ER on that side of the disk. Please add SEG.ER to your copy of Figure 2.*
2. *AppleWorks 3.0 expects to find all its program and dictionary files on disks named /APPLEWORKS. Remember to assign that name to all disks that contain AppleWorks program modules or spelling dictionaries. Also, remember that you cannot name your data disks /APPLEWORKS.*
3. *While our suggested reorganization of the AppleWorks program files on 5.25-inch disks makes efficient use of disk space, it does not leave enough room for accessory programs like TimeOut and UltraMacros that install themselves on the AppleWorks Startup Disk. (By the way, the original 5.25-inch AppleWorks disks leave room for TimeOut, but not enough room for UltraMacros.) Once again, the way you configure your disks depends on the number of AppleWorks modules you use and whether you use only TimeOut or both TimeOut and UltraMacros. Proceed as follows:*

 A. *If you use only one or two AppleWorks modules and TimeOut or UltraMacros, configure your disk as suggested in Figure 4A on page 6 of the October 1989 issue of the **AppleWorks Forum**.*

 B. *If you use all three AppleWorks modules and TimeOut, but not UltraMacros, use copies of the original disks supplied by Claris.*

 C. *If you use all three AppleWorks modules, TimeOut, and UltraMacros, use copies of the original disks supplied by Claris but remove the file FASTCOPY from the AppleWorks Startup Disk to make enough room for both TimeOut and UltraMacros.*

AppleWorks continues to sound more like a family dinner at a Chinese restaurant ... two from Column A and one from Column B ... but that seems to be the price of all the flexibility built into the program and its enhancements.]

Proportional Fonts and Full Justification Revisited

Dear Ms. Merritt:

Your response to Pastor Jones' letter in the October 1989 issue of the ***AppleWorks Forum*** indicates that one cannot use both a proportional font and full justification in AppleWorks. Apparently I am doing something that is not possible ... I routinely use both proportional fonts and full justification.

AppleWorks Forum

Editor: Cathleen Merritt
Associate Editor: Warren Williams
Page Layout: Nanette Luoma
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Letters...

You are correct that full justification is unacceptable when used with settings of 10 cpi or 12 cpi, but that's exactly why I use P1 or P2 and full justification when I want flush left and right margins.

Prof. Bernard Katz
Ramat Aviv, Israel

*[Ed: My thanks to the many **NAUG** members who wrote me about this matter. As you would expect, most of the letters were printed in fully justified, proportional fonts.*

It turns out that the ability to produce both proportional and fully justified output depends on the printer you use with AppleWorks. ImageWriter printers produce excellent results when you justify both the P1 and P2 proportional fonts. If you have an ImageWriter, try these settings. The output is impressive.

However, the results are less predictable with other printers. For example, I could get neither proportional type nor full justification on two old Epson printers. A Mannesmann Talley MT-85, an Epson-compatible printer, produced justified output at the 10, 12, and 17 cpi settings and attractive proportional output with the P1 and P2 fonts. However, the Mannesmann Talley could not produce fully justified proportional output; it gave me left justified output instead.

*I printed from AppleWorks using Apple Computer's ImageWriter Emulator on **NAUG's** LaserWriter. As expected, the P1 and P2 commands produced different size proportionally spaced Times output. However, the LaserWriter put far too much space between words when producing fully justified output; the printout was unacceptable.*

I think a pattern emerges here. Since it is so easy to produce both proportional and justified output, I suggest you print some samples and determine how well your printer handles this font and format combination.]

The ***National AppleWorks Users Group*** **(NAUG)** is an association that supports AppleWorks users. **NAUG** provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the ***AppleWorks Forum***.

AppleWorks News

New Products from Applied Engineering and Beagle Bros

Applied Engineering

PC Transporter: Applied Engineering recently lowered the suggested list price of its PC Transporter from $679 to $499. The PC Transporter lets you run MS-DOS software on an Apple II+, IIe, or IIGS, functions as a 768K RAM disk for Apple II applications, and provides more than 500K of additional RAM for the AppleWorks desktop. For more information, contact Applied Engineering, Box 5100, Carrollton, Texas 75011; (214) 241-6060.

Beagle Bros

AW 3.0 Companion: Beagle's new AW 3.0 Companion installs and removes more than 40 patches to AppleWorks 3.0. The patches, written by Mark Munz and Randy Brandt, let you use mousetext to enhance AppleWorks' menus, cancel the automatic form feed after printing with Apple-H, reserve space for a RAM disk on a peripheral slot memory card, put the cursor where you left it when you load a word processor or data base file onto the desktop, define Apple-Tab so the cursor jumps to the previous tab in the word processor, send the cursor to the next record after you press Return in the last category in multiple record layout in the data base, and limit the spreadsheet to 999 rows for faster operation.

The AW 3.0 Companion also fixes four known problems with AppleWorks 3.0, including the problems that occur when you replace the original ImageWriter with another printer or try to print more than one report from the data base module.

The AW 3.0 Companion disk includes TimeOut Pathologist that displays and lets you modify the pathname to every file on your desktop, TextLoader Plus that lets you load up to 12 text files into the word processor in a single operation, and Directory Manager that makes it easy to change the default pathname for files on your desktop.

The AW 3.0 Companion lists for $39.95 and is scheduled for release in late December. (**NAUG** members can purchase the AW 3.0 Companion from **NAUG** for $25.95 plus $3 s/h.)

The TimeOut Series of AppleWorks Enhancements.



TimeOut Thesaurus: $49.95
Find the perfect word to express your thoughts. Thesaurus, with its 45,000 word dictionary, displays synonyms and adds the replacement word right to your document with no typing.

TimeOut SuperFonts: $69.95
Everybody will think you own a Mac when you print with SuperFonts! Print from AppleWorks with fancy fonts and graphics. Comes with 47 fonts and a free Paint program!

TimeOut Graph: $89.95
Create ready-to-print graphs, complete with titles, borders, legends and more. Just choose one of the 9 graph types you want and it appears instantly. Also includes free Paint program.

TimeOut UltraMacros: $59.95
Automate AppleWorks with this ultra-powerful program. Never retype repetitive information again. Record your keystrokes as you go, and then play them back — up to 4,000 at once!

TimeOut SideSpread: $49.95
Print your Spreadsheet and Data Base files sideways — right inside AppleWorks! SideSpread can print all or part of your file in a wide variety of fonts and print qualities.

TimeOut SpreadTools: $59.95
This collection is a must for every Spreadsheet user: scan for errors, track cell references and link cells from different Spreadsheets into a master Spreadsheet!

TimeOut QuickSpell: $69.95
The fastest spell checker around! With its 80,000 word dictionary, QuickSpell is the perfect electronic proofreader — never be embarrassed by a spelling mistake or double word again!

TimeOut DeskTools: $49.95
Add a calendar, note pad, four-function calculator, clock, file encrypter, case converter and telephone dialer to AppleWorks. All these basic conveniences — and more — in one package.

TimeOut DeskTools II: $49.95
More AppleWorks tools our customers have demanded: a scientific/financial calculator, area code finder, file searcher, screen saver, disk tester and stop watches. Something for everybody.

TimeOut TeleComm: $69.95
Link AppleWorks to the world! TimeOut TeleComm is simple to use with no sacrifice in power. Capture text directly to an AppleWorks Word Processor file or 4,000 line review buffer.

TimeOut FileMaster: $49.95
Never leave AppleWorks again to use a disk utility program. Copy, rename, lock and unlock files. You can even back up and compare disks with FileMaster's easy-to-use interface.

TimeOut PowerPack: $49.95
A fantastic collection of TimeOut applications: make your own help menus, create a Data Base of all your files, triple your clipboards and triple your desktop files. Plus 6 more applications.

TimeOut MacroTools: $25.00
More macro files: auto-save files at preset intervals, change the AppleWorks' bell, eject disks, and create your own custom menus. Plus many more amazing macro feats! Requires UltraMacros.

TimeOut MacroTools II: $25.00
Even more macro files: print Word Processor files in 2 or 3 columns, type directly to the printer, simulate more Data Base categories, reset the date, and many more. Requires UltraMacros.

TimeOut ReportWriter: $79.95
ReportWriter's flexible relational report generator makes AppleWorks a powerful business tool. Generate invoices, billings, forms, AR/AP, and more.

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Hints and Ideas for the Spell Checker

by Warren Williams

NAUG receives many questions from readers who want to get more flexibility from AppleWorks 3.0's built-in spell checker. Here are some answers to the most frequently asked questions:

Q: I ordered 3.5-inch disks when I upgraded to AppleWorks 3.0. Now I want to work on a 5.25-inch disk system. I copied the AppleWorks program files onto separate disks, using the suggested organization for those files that appeared in the October 1989 issue of the *AppleWorks Forum*. But the spelling dictionary is too large to fit on a 5.25-inch disk. What can I do?

A: As you discovered, the 3.5-inch disk version of AppleWorks comes with a spelling dictionary that will not fit on a 5.25-inch disk. Fortunately, there is a solution to your problem. AppleWorks' spelling dictionaries are compatible with the dictionaries that come with TimeOut QuickSpell. If you have a 5.25-inch copy of any version of QuickSpell, you have the dictionaries you need.

AppleWorks 3.0 looks for its dictionaries on the same disk or directory that contains the file APLWORKS.SYSTEM, so use a disk utility program and change the name of the QuickSpell dictionary disk to /APPLEWORKS. Then insert this disk when AppleWorks calls for the spelling dictionary. You can also remove the file COPY.DICTS from the disk to make room for a larger custom dictionary.

Q: I used to speed up TimeOut QuickSpell by setting up my memory card as a RAM disk and copying the spelling dictionaries onto that "disk". AppleWorks 3.0 insists on looking for the spelling dictionaries on a disk drive and won't let me use a RAM disk to speed up the spelling program. Is there any way to overcome that limitation in 3.0?

A: You can use a RAM disk with the AppleWorks 3.0 spelling checker if you have an Apple IIGS or a peripheral slot memory card in your IIe, IIc, IIc Plus, or Laser. (RamFactor cards, Apple Memory Expansion cards, and RAM Express cards are peripheral slot cards; RamWorks and Z-Ram Ultra cards are not.)

How to use the spell checker with a RAM disk.

To set up a RAM disk on a IIGS, set the minimum and maximum RAM disk settings on the Control Panel to at least 224K to accommodate AppleWorks 3.0's 3.5-inch spelling dictionary. Then reboot your computer; the system will set up a RAM disk named /RAM5.

Peripheral slot memory cards automatically set up a RAM disk with the name /RAMn; "n" stands for the slot number where the card resides.

Then you need Randy Brandt's new SpellCopy program from JEM Software. SpellCopy patches AppleWorks so you can specify a pathname to the spelling dictionaries. Without this patch, AppleWorks 3.0 always looks for the spelling dictionaries on a disk with the same name as the disk you used to boot AppleWorks. That's why AppleWorks cannot find the dictionaries on the RAM disk.

If you install SpellCopy on your AppleWorks Startup Disk, the program will automatically copy the spelling dictionaries onto the RAM disk when you boot AppleWorks.

You should seriously consider using a RAM disk for your spelling dictionaries if you have 512K or more of memory in your computer. AppleWorks runs the spelling program and makes spelling sug-

gestions almost four times faster from a RAM disk than from a 3.5-inch disk drive.

Unfortunately, it is more difficult to configure RamWorks, Z-Ram Ultra cards, and other auxiliary slot memory cards to work as a RAM disk with AppleWorks 3.0. AppleWorks takes over the memory on these cards for its desktop, thus damaging any files you store on the RAM disk. While there are public domain patches for AppleWorks that let you preserve the RAM disk, most users should wait for new RAM disk software from the manufacturer of their card. Applied Engineering expects to release its AppleWorks expansion software within the next two months, but they ask that you not call to inquire about its availability. They will announce the product in the ***AppleWorks Forum***.

(SpellCopy costs $12.50, including shipping, from JEM Software, Box 20920, El Cajon, California 92021.)

Q: I recently switched to AppleWorks 3.0 and notice that many operations are slower than in earlier versions of AppleWorks. This is particularly true of the spell checker, which I find significantly slower than TimeOut QuickSpell. Why is this happening and how can I speed up the spelling program?

A: It is true that many operations are somewhat slower in AppleWorks 3.0 than in earlier versions of the program. **NAUG** is testing the speed differences and will publish an article graphing those findingss in a future issue of the ***AppleWorks Forum***.

The spell checker in AppleWorks 3.0 operates at about the same speed as TimeOut QuickSpell ... until you ask the programs to give you suggestions for misspelled words. Then AppleWorks 3.0 slows down dramatically. The reason is that AppleWorks 3.0 uses a more sophisticated spelling suggestion algorithm than QuickSpell.

QuickSpell uses an alphabetical algorithm to make its suggestions. The program looks in its dictionary for any word that starts with letters similar to the word you entered. As a result, QuickSpell is fast and gives you many spelling suggestions. However, it is like looking in a dictionary for any word that is on the same page as the word you typed. QuickSpell does not pay attention to the sound or relationship between the letters. For example, when you type "sichology", QuickSpell suggests schlock (no kidding, try it), schooled, schools, schooner, scrooge, and a list of similar words that start with the letters "sc". Type "filosophy", and QuickSpell gives you words that start with the letter "f".

AppleWorks 3.0 uses a phonetic algorithm for its spelling suggestions. It analyzes the sound of the words you enter and tries to figure out what you want to spell. It's like looking through a dictionary for words that sound like the word you typed. As a result AppleWorks 3.0 generally gives you fewer, but better suggestions. For example, "filosophy" and "sichology" yield only one suggestion each, the correctly spelled words "philosophy" and "psychology". Unfortunately, AppleWorks 3.0's more sophisticated approach takes it longer to search the spelling dictionary.

There are at least two things you can do to speed up the AppleWorks 3.0 spell checker. The fastest way to run the program is to get Randy Brandt's SpellCopy program (see above), configure some of the memory in your computer as a RAM disk, and copy the dictionaries onto that "disk". Running from a RAM disk on my Apple IIGS, the AppleWorks 3.0 spell checker takes less than two seconds to give suggested spellings for "filosophy" and about four seconds for "sichology".

Alternatively, you can store the dictionaries on a hard disk. AppleWorks 3.0 takes less than four seconds to give a suggested spelling for "filosophy" and approximately ten seconds for "sichology" when running on my Apple IIGS with a Chinook Technology CT-20 hard drive.

The spell checker built into AppleWorks 3.0 is a valuable feature. As with all spelling programs, we would be happier if it ran faster, took less disk space, recognized every correct word we typed, and always gave us the correct spellings when we erred. However, every product represents a compromise. For many of us, the spelling program in AppleWorks 3.0 represents a reasonable compromise between speed, functionality, and power.

How to Add Graphics to Documents with SuperFonts

by Donna Takayesu

This is the second of three articles that describe how to use TimeOut SuperFonts to enhance your AppleWorks documents. This month, Donna Takayesu describes how to incorporate HiRes graphics into a word processor document. Next month, Irene Fogel will describe how to use scanned images with AppleWorks.

There are many ways to enhance AppleWorks word processor documents with graphics. Unfortunately, the most powerful techniques require a page layout program like Publish-It!2, AppleWorks GS, or Medley. You enter your text in AppleWorks and use the page layout program to prepare and print the document.

A less expensive alternative is to use AppleWorks and TimeOut SuperFonts. SuperFonts can print in dozens of proportionally spaced fonts and lets you intersperse high resolution (HiRes) and Double-HiRes graphics with your AppleWorks text.

Figure 1 presents an example of SuperFonts output that combines a graphic image with a word processor document. *Figure 2* depicts the AppleWorks file that generated the picture in *Figure 1*.

While the combination of graphics and word processing text is impressive, you must recognize that SuperFonts is not designed to do page layout. For example, the program does not easily handle two or three-column output, does not let you mix graphics and text on the same line, and does not let you interactively crop graphic images on the screen.

However, note that the example in *Figure 1* puts the word "PANDAS" on the same line as the picture. While you cannot combine AppleWorks text and HiRes graphics on a single line with SuperFonts, you can enter the text you want as a part of the graphic image.

How to Import Graphics into SuperFonts

To import a graphic image into SuperFonts, you assign a number to the graphic at the beginning of the AppleWorks word processor file, and use that number to place the graphic image in the document. For example, the command

```
<P3=/PICTURES/PANDA>
```

at the beginning of the word processor document in *Figure 2* assigns the code <P3> to the graphic named PANDA on the PICTURES disk. Later, you will insert the command <P3> where you want the graphic to appear in the output.

You can control the placement of a graphic with AppleWorks and SuperFonts formatting commands. For example, you can use AppleWorks' Apple-O command to issue printer options that center or left justify an image. SuperFonts' <RJ> command will right justify the graphic, and SuperFonts' <NB> (Inverse Begin) command will print the image in inverse. Remember to turn off the justification and inverse features before you resume normal text in your document.

How to Crop the Graphic

You can tell SuperFonts to print a selected portion of the graphic image by defining the coordinates of the upper left and lower right-hand corner of the image you want to print. For example, I cropped the image in *Figure 1* by issuing the command

<P3,42,36,279,95>.

That command says, "Put picture P3 here, but crop the image so it shows only what is between pixel 42,36 in the upper left-hand corner and pixel 279,95 in the lower right-hand corner."

You can use either TimeOut Paint or an estimating procedure to find the coordinates you need to crop an image.

Using TimeOut Paint

TimeOut Paint is an easy-to-use graphics program that works within AppleWorks and comes free with the current versions of SuperFonts and TimeOut Graph. *[Ed: It used to cost $20 to add Paint to older versions of SuperFonts or Graph, but you now get Paint free when you update SuperFonts or Graph to version 3.0 through* ***NAUG's*** *Beagle Buddies. See the October issue of the* ***AppleWorks Forum*** *for information about these Time-Out updates.]*

Note that Paint does not work well with AppleWorks 2.x when you modify AppleWorks to recognize an Applied Engineering RamWorks memory expansion card. Of course, AppleWorks 3.0 corrects this problem.

Figure 1: Sample Output from SuperFonts

. . . ENDANGERED SPECIES

PANDAS 

These powerful giants are not the playful teddy bears that first come to mind when the word "Panda" is mentioned. A distant relative of the North American racoon, the panda's very survival depends on our good will and care of its habitat.

Pandas are selective eaters, choosing to eat only a very few varieties of bamboo that is native to their particular area of Tibet and western China. Nature deals them a capricious blow, because every eighteen or so years all species of any particular bamboo dies for a few months, leaving pandas to subsist on other foods which are strange to them.

Our exposure to pandas in zoos, has shown us that they are not ready breeders. When mating has occurred, and the pregnancy carried successfully to term, the birth and raising of the young is very precarious.

Figure 2: File that Generates Graphic Output

```
File: PANDA.ENDANGER                REVIEW/ADD/CHANGE                Escape: Main Menu
═══════════════════════════════════════════════════════════════════════════════

<P3=/PICTURES/PANDA>
<2=/SF/TIMES.20>
<3=/SF/TIMES.14>
<2><IB><RJ>. . . ENDANGERED SPECIES<IE>
--------Centered
                                <P3,42,36,279,95>
--------Unjustified
<3>These powerful giants are not the playful teddy bears that first come to mind
when the word "Panda" is mentioned. A distant relative of the North American rac-
coon, the panda's very survival depends on our good will and care of its habitat.

Pandas are selective eaters, choosing to eat only a very few varieties of bamboo
that is native to their particular area of Tibet and western China. Nature deals
them a capricious blow, because every eighteen or so years all species of any
particular bamboo dies for a few months, leaving pandas to subsist on other foods
which are strange to them.
-------------------------------------------------------------------------------
Type number, or use arrows, then press Return                      936K Avail.
```

Paint makes it easy to identify the coordinates you want to use to crop a graphic. Follow these steps:

1. Go to the TimeOut Menu and invoke Paint.
2. Issue an Apple-D command and set the prefix or choose the slot and drive that will contain your graphic disk.
3. Insert the graphics disk in the drive, issue an Apple-O command, choose the file you want to use from the disk, and select "Open". A HiRes graphic will appear on half the screen; a Double-HiRes graphic will fill the screen.

While SuperFonts can print both regular HiRes and Double-HiRes graphics, Double-HiRes images are twice as wide and twice as tall as regular HiRes graphics. You can use either graphic image for printouts, but can only use regular HiRes graphics for "slides" you display on the preview screen. Unfortunately, SuperFonts distorts Double-HiRes graphics on the preview screen and makes that display unsuitable for your "slides". *[Ed: For information about*

preparing slides, see the article entitled "How to Use SuperFonts to Enhance Your Presentations" in last month's issue of the ***AppleWorks Forum****.]*

Paint files are always Double-HiRes. If you use Paint to determine coordinates for slides, you must be careful to preserve the original HiRes file by covering the write-protect notch on 5.25-inch disks, by opening the write-protect slide on 3.5-inch disks, or by removing the disk from the drive after you load the file into Paint.

If you want to modify your graphic with Paint, save the enhanced document with Paint's Apple-A (Save As...) command and give the file a new name. Do not overwrite the original HiRes file; you will not be able to recover that file from your disk.

4. Issue an Apple-B command and draw a box around the portion of the picture you want to use in SuperFonts. (Press the Escape Key if an important part of the picture is under the Menu Bar. Then draw the box and press the Escape Key again; the Menu Bar will re-appear.)

5. Issue an Apple-W command to display the cursor coordinates on the Menu Bar. You will see these coordinates change as you use the mouse or Arrow Keys to move the Paint cursor on the screen.

 You need to identify two pairs of coordinates; one for the upper left-hand corner of the graphic and one for the lower right-hand corner. Put the cursor in the upper left-hand corner of the box and write down the coordinates that appear on the Menu Bar. (The first number is the number of pixels from the left margin and the second number is the number of pixels from the top.)

 Repeat this process to define the lower right-hand corner of the graphic image. The bottom margin of the HiRes screen is 191 pixels down, and the right margin is 279 pixels. Double-HiRes graphics share the same 191 pixel height, but are 599 pixels wide. (Although HiRes and Double-HiRes *screens* are both 191 pixels tall, the Double-HiRes image *prints* twice as tall.)

 To prepare a "slide", the maximum vertical height must not exceed 160 pixels, and the horizontal width cannot be greater than the 279 pixels of a regular HiRes graphic image.

6. Issue an Apple-Q to quit Paint and respond "N" for "No". You do not want to save the file.

You now know the coordinates to enter into the AppleWorks word processor file to crop the graphic. Proceed as follows:

7. Issue an Apple-1 to go to the beginning of the word processor file.

8. Type <P1=/pathname/graphic.file>. Use the pointy brackets. Substitute the name of the disk containing the graphic for "pathname" and the name of the file containing the graphic image for "graphic.file".

9. Type the following on the line where you want the picture to appear:

   ```
   <P1,a,b,x,y>
   ```

 where "a,b" are the upper left-hand coordinates of the cropped image, and "x,y" are the lower right-hand coordinates of that image.

If You Do Not Use Paint

If you do not have Paint, you can locate the coordinates by trial and error. Follow these steps:

1. Create a new word processor file for your experimentation.

2. Issue an Apple-1 command to insure that you are at the beginning of the file.

3. Enter these lines to print the contents of the Single HiRes screen:

   ```
   <P1=/pathname/graphic.name>
   --------Left Margin: Ø.Ø inches
   <P1>
   ```

 (Substitute the correct pathname and file name in this entry.)

4. Go to the TimeOut Menu, invoke SuperFonts, and print the graphic to the SuperFonts preview screen.

5. Imagine a box around the portion of the image you want to use. Ask yourself how far the upper left-hand corner is from the left edge. (Remember that the whole width is 279 pixels.) How far

down is this corner from the top? (The total height is 191 pixels.) Repeat these questions for the lower right-hand corner.

6. Press the Escape Key until you return to AppleWorks and enter the coordinates separated by commas after <P1> in the word processor document ... like this: <P1,1st,2nd,3rd,4th>.
7. Use SuperFonts to "print" the word processor file on the SuperFonts preview screen. Examine the output to see if you like the estimates of the coordinates for the cropped image.
8. Since you are estimating the coordinates, you will have to repeat steps #4 - 7 until you get the coordinates you like. Then copy the line with the coordinates to the AppleWorks clipboard and transfer it into your original word processor file.

A Double-HiRes graphic scrolls over two preview screens, so I suggest you use a somewhat different procedure to locate the coordinates of the cropped image.

In step #4 above, print the graphic to the printer instead of to the screen. The maximum height in step #5 stays at 191 pixels, but the width of Double-HiRes graphics is 559 pixels. Estimate the coordinates and "print" the graphic on the screen. You can then compare the results to your printed output and put marks on the printout to help you estimate the correct coordinates.

Experiment

Experiment and try all the possibilities. I suggest you print the output in standard, tall-adjusted, and reduced 50% mode, and save those samples to help with your future work.

Summary

TimeOut SuperFonts is a powerful tool that gives you high quality, Macintosh-like output from AppleWorks. In this article I described how to use SuperFonts and TimeOut Paint to prepare documents and "slides" that include graphics, in addition to the attractive text output available from SuperFonts.

[Donna Takayesu is Vice-President of the Hamilton (Ontario, Canada) Apple Computer Klub (H.A.C.K.) and is the editor of the group's monthly newsletter.]

New Products from JEM Software

JEM Software recently announced four new products for AppleWorks users.

SpellCopy: SpellCopy modifies AppleWorks 3.0 so it can find its spelling dictionaries on any disk you specify, including a RAM disk. SpellCopy can also automatically copy the dictionaries onto a RAM disk before launching AppleWorks.

5.25-inch disk owners can use SpellCopy to reduce disk swapping with AppleWorks 3.0. You rename the dictionary disk and use SpellCopy to tell AppleWorks the new dictionary disk name. Leave the dictionary disk in Drive 2 as you work, and AppleWorks will find the dictionaries when you issue a Verify Spelling Command. SpellCopy, written by Randy Brandt, costs $12.50.

DoubleData: DoubleData patches AppleWorks 3.0 so each data base record can include up to 60 categories. DoubleData-patched copies of AppleWorks provide two single record layout screens for each record in a data base file; you jump between screens with an Apple-J command. You can combine data from the two screens into a single report. DoubleData, written by Dan Verkade, costs $30.

FlexiCal: FlexiCal adds an automated appointment calendar/scheduling system to AppleWorks 2.0 and later. The program makes it easy to enter and track appointments and automatically generates printed daily, weekly, and monthly calendars. Written by Lester Simpson, FlexiCal costs $30.

Mr. Invoice: Mr. Invoice is an invoicing and order entry system for AppleWorks 3.0. The program maintains a customer data base, automatically updates inventory records, tracks backorders, prints on any custom form, and tracks monthly or annual sales. The program keeps all data in standard AppleWorks files you can use to generate custom reports. Mr. Invoice, written by Mark Munz, costs $40.

All JEM products include documentation in an AppleWorks word processor file on the disk. Prices include shipping. JEM Software, Box 20920, El Cajon, California 92021.

How to Get Started with the Data Base Module — Part 2

by Cathleen Merritt

This is the second in a series of three articles designed to help novices get started with the AppleWorks data base module. While the articles are intended for novices, advanced readers might find some useful suggestions in this series, and AppleWorks teachers can use these articles with beginners.

In last month's article, I explained when to use the AppleWorks data base module, how to define the categories in a data base file, how to restructure the data base screen displays, and how to enter data. This month, I will describe how to reorganize the records, how to select records to display on the screen, and how to edit the data in those records. I will assume you created the name and address file I described last month.

Use Apple-A to Arrange the Records

As you know, AppleWorks stores your data in individual records. The program normally arranges your data in the order in which you originally enter each record. However, AppleWorks offers a powerful Arrange Command (Apple-A) that lets you re-sequence the records in the file.

Follow these steps to rearrange the records:

1. Issue an Apple-S command to save the data in its current order. There is no "Unarrange Command" in AppleWorks, so you should always save the original file on your data disk before issuing an Apple-A command. Then, if you do not like the new sequence of the records, you can restore the file to its original condition by removing the re-arranged file from the desktop and bringing the previous version onto the desktop from the data disk.
2. Display the data in either single record or multiple record layout. Put the cursor in the category you want to use as the basis for reorganizing the records, and issue an Apple-A command.
3. How you proceed from this point depends on whether you use AppleWorks 3.0 or an earlier version of AppleWorks.

 AppleWorks 2.1 and earlier presents a list of ways you can sort the records; alphabetically (from A to Z, or Z to A), or numerically (from Ø to 9, or 9 to Ø). (If you are using a "DATE" or "TIME" category to sort the records, AppleWorks also lets you sort the data into chronological order.) Select the method you want, and press the Return Key to rearrange the records in memory. If you like the new structure of your file, issue an Apple-S command and save the reorganized data base file.

 AppleWorks 3.0 lets you sort the records by up to three categories in a single operation. For example, you can tell AppleWorks 3.0 to put people in alphabetical order based on their last names and, if more than one person has the same last name, to put the data in order by the first name.

 Here is how to use the multiple-sorting feature of AppleWorks 3.0 to sort the address data base we developed last month.

 A. Put the cursor on the LNAME category and issue an Apple-A command. The program will ask:

```
Arrange (sort) on?   Category (LNAME)   Several categories
```

 If you choose "Category (LNAME)" AppleWorks will use just that category to sort the

data. This is identical to the process I described for earlier versions of AppleWorks.

In this example, you want to sort based on more than one category, so select "Several categories".

B. AppleWorks 3.0 presents a list of all the category names. Select the "most important category" in the sort; i.e., the category on which to base the final sort.

Generally, you want to sort the people in last name order. That is, you want all the Adams before all the Bakers, and you want all the Bakers before all Conklins. Thus, the LNAME category is the "most important category" for this sort. Highlight that category name and press the Return Key.

C. AppleWorks 3.0 then presents a list of sorting alternatives such as "A to Z" and "Ø to 9". Select "A to Z" and press the Return Key.

D. The program next lets you specify a "second most important" category for the sort.

You want to sort the records in order by LNAME, but if the LNAME category is the same, you want to sort the records in order based on FNAME. Therefore, FNAME is the second most important category for the sort. Select FNAME and press the Return Key.

E. AppleWorks again presents the list of sorting alternatives; select the basis for the sort and press the Return Key.

F. AppleWorks 3.0 can sort by up to three categories in a single operation, so the program asks if you want to specify a third, less important category for the sort. You only want two sort categories in this example; press the Return Key to accept the "Arrange file now" option. Do not press the Escape Key; that cancels the Arrange Command.

AppleWorks will sort the file into the order you specified. Display the data in multiple record layout (enter an Apple-Z if the file is in single record layout) and examine the sequence of the records. If the sort is correct, issue an Apple-S command to save the reorganized file. If it is not correct, issue another Apple-A command and start again.

Sorting with Earlier Versions of AppleWorks

While AppleWorks 3.0 automates the multiple sorting process, you can do multiple sorting with any version of AppleWorks. The trick is to do repeated sorts starting with the "least important category" and progressing toward the "most important category".

If you are using AppleWorks 2.1 or earlier, follow these steps to sort the records in your name and address file:

1. Issue an Apple-S command to save the current file. That should always be your first step when using the Apple-A command.
2. Put the cursor on the "least important category"; in this case the FNAME category.
3. Issue an Apple-A command.
4. Indicate you want to sort from "A to Z".
5. Put the cursor on the "most important category"; in this case the LNAME category.
6. Issue another Apple-A command.
7. Indicate you want to sort from "A to Z".
8. Get into multiple record layout and examine the sequence of the records. If they are in correct order, issue an Apple-S command to save the rearranged file.

You can repeat this process as often as necessary, therefore you can sort your records by an unlimited number of categories.

How to Select Records: Apple-F

One of the reasons to keep your records in an electronic data base program is to let you find data quickly and conveniently when you need it. AppleWorks gives you two commands that let you select specific records. The Apple-F (Find) command is easier to use, but less powerful than the Apple-R (Record Selection Rules) command. The differences will become obvious as we consider these two features.

First, you need to understand the concept of "currently active records".

The Apple-F and Apple-R commands let you select a subset of the total data base file. While all the records remain in memory, only the selected records appear on the screen. The selected records are "active". Some AppleWorks commands (such as Apple-A) work on all records in the file. Other commands only work on the active records.

Apple-F: The Apple-F command lets you look through the active records in a data base for any series of characters you enter. AppleWorks 3.0 gives you a choice; you can search a single category or all categories. Earlier versions of AppleWorks do not offer that choice; they automatically check all categories.

Try the Apple-F command with your data base on the screen and type in the letters "wil" to see if AppleWorks finds any matching records. If you use AppleWorks 2.1 or earlier, or if you tell AppleWorks 3.0 to "Find Anywhere", the program finds all records that contain the characters "wil" anywhere in the record. Thus, AppleWorks selects anyone with the first name "William", the last name "Williams", and anyone who lives on "Twilliger Street" or in "Williamston".

AppleWorks 3.0 lets you restrict the Find Command to a specific category, but it will still find everyone with last names of "William", "Williams", "Wilson", "Twilliger", and any other last name that contains "wil".

You cancel the effect of the Apple-F command and make all records active by pressing the Escape Key.

How to Select Records: Apple-R

It should be obvious that AppleWorks' Find Command is easy to use, but of limited power. For example, you cannot use this command to check for blank categories, numeric entries greater than a certain value, or entries made before or after a given date. That is the domain of Apple-R, the Record Selection Rules Command.

Issue an Apple-R and AppleWorks prompts you through a series of screens that let you specify the categories you want to examine, the rules you want applied to each category, and the relationship between the selection rules you want to apply. For example, you can use Apple-R to locate all invoices after December 1, 1989 with amounts of more than $5,000.

Figure 1: Apple-R Selection Screen

```
File: ADDRESSES        SELECT RECORDS      Escape: Review/Add/Change

Selection:

 1. TITLE                    16. X4
 2. FNAME                    17. X5
 3. LNAME                    18. X6
 4. ADDRESS1                 19. X7
 5. ADDRESS2                 20. X8
 6. CITY                     21. X9
 7. STATE                    22. X10
 8. ZIP
 9. AREA CODE
10. PHONE
11. CODES
12. BDATE
13. X1
14. X2
15. X3
Type number, or use arrows, then press Return          936K Avail.
```

Try the following exercise that has you locate all relatives that live in Michigan. (I assume you inserted the code of "r" for all relatives in the name and address file you developed as a part of last month's article.) Follow these steps:

1. Load the data base file onto the AppleWorks Desktop and issue an Apple-R command.
2. AppleWorks displays a list of all the categories in the file (see *Figure 1*). Highlight the "STATE"category and press the Return Key.
3. AppleWorks displays the "Rules" screen. That lets you specify the selection rule you want to use in the STATE category (see *Figure 2*). You want to test if the entry in the STATE category matches text you will enter, so select "equals" from the list of rules and press the Return Key.
4. The program asks you to enter the information you want to find in the STATE category. Type in the two-letter abbreviation of your state and press the Return Key.
5. AppleWorks then displays the screen that appears in *Figure 3*. Note that the top of the screen shows the selection rule you just specified; in this example, "STATE equals MI".

Figure 2: Apple-R "Rules" Screen

```
File: ADDRESSES        SELECT RECORDS        Escape: Review/Add/Change

Selection: STATE

================================================================================

 1.  equals
 2.  is greater than
 3.  is less than
 4.  is not equal to
 5.  is blank
 6.  is not blank
 7.  contains
 8.  begins with
 9.  ends with
10.  does not contain
11.  does not begin with
12.  does not end with


--------------------------------------------------------------------------------
Type number, or use arrows, then press Return                  933K Avail.
```

Figure 3: Apple-R "Linking" Screen

```
File: ADDRESSES        SELECT RECORDS        Escape: Review/Add/Change

Selection: STATE equals MI

================================================================================

 1.  and
 2.  or

--------------------------------------------------------------------------------
Type number, or use arrows, then press Return                  929K Avail.
```

AppleWorks lets you specify up to three selection rules in each Apple-R command. The program needs to know if you want to specify a second selection rule and the relationship between the two rules.

If you want only a single selection rule, press the Escape Key to indicate you are done entering selection rules. In this example you want to specify a second rule, so you must indicate whether you want the two rules to be linked by "and" or "or". (AppleWorks sometimes offers a third alternative: "through".)

Responding "and" tells AppleWorks to select records that meet both selection rules you specify. That is, the record must match both rule A *and* rule B.

Responding "or" says you want records that match either selection rule. That is, the record must match either rule A *or* rule B.

Responding "through" indicates you want to specify a range of entries. For example, you can specify all entries between September 1, 1988 and August 31, 1989.

In this example, you want to select records for all people who live in your state *and* who are relatives; select "and".

6. You coded all your relatives with an "r" in the "CODES" category, so you will now specify that you want to select all records that contain that code. Indicate you want to check the "CODES" category.

7. You want all records that contain a code of "r", so pick "contains" from the Selection Rules screen.

8. Enter the letter "r" in response to the "Type comparison information" prompt.

 You now defined the rule as follows: 'Select all records where the STATE category contains "MI" and the CODES category contains "r".'

9. AppleWorks lets you specify a third selection rule, but you are done. Press the Escape Key.

The top of the data base screen now indicates that record selection rules are in effect. Display the records in multiple record layout and note that AppleWorks only displays records that meet the selection criteria you specified. To view all the records, you must issue another Apple-R command and respond "Yes" to the "Select all records?" prompt.

Comparison of Apple-F and Apple-R

While the Apple-F and Apple-R commands both select specified records from the total data base file, there are significant differences between the functionality and power of the two commands. *Figure 4* summarizes those differences.

Figure 4: Comparison of Apple-F and Apple-R

	Apple-F	Apple-R
Number of categories searched	All*	1-3
Allows selection rules	No	Yes
Links selection rules	No	Yes
Makes unselected records inactive	Yes	Yes
How to restore inactive records	Escape Key	Apple-R
Rules saved with file	No	Yes
Affects data printed in a report	No	Yes

*AppleWorks 3.0 can limit a search to a single category.

Some components of the chart in *Figure 4* need further explanation.

"How to restore inactive records": Both the Apple-F and Apple-R commands make a portion of the data base file "inactive", and inactive records do not show on the screen. If you use an Apple-F to hide inactive records, you press the Escape Key to restore all the records to the screen. When you use Apple-R to select records, you must issue another Apple-R command to get all the records back on the screen.

"Rules saved with file": If you invoke an Apple-R command, set selection rules for the file, and then issue an Apple-S command, AppleWorks saves those rules with the data. The selection rules will be in effect when you load the file onto the desktop from the disk.

That is not true of the Apple-F command; AppleWorks does not store the status of the Apple-F command with the data file. To test this, invoke an Apple-F command, select some records, and save the file. Then load the file onto the desktop from the disk and you will find that all the records are once again active.

"Affects data printed in a report": Just as the Apple-R command affects a file saved on disk, so it limits the records printed in a report you generate from within the file. (I will describe how to generate reports in next month's article.) That is, if you use the Apple-R command to select specific records and then print a report from the data base file, the report will contain only the selected records. By contrast, if you use Apple-F to select records, the report will contain all records in the file.

How to Maintain Your Data

Up to now, I discussed how to rearrange and select existing data. However, you also must know how to add and correct data in the file. Data base maintenance generally involves three operations:

1. Inserting new records.
2. Deleting unnecessary records.
3. Modifying existing records.

Inserting New Records

AppleWorks' Apple-I (Insert) command is the key to inserting new records. When you issue an Apple-I command, AppleWorks enters "Insert New Records" mode and displays a blank record on the screen. You type the data into that record and press the Apple-Down-Arrow Keys to declare you are done entering data. AppleWorks will store that record and display a new form on the screen.

Press the Escape Key when you are done entering data to return to Review/Add/ Change mode.

Deleting Unnecessary Records

The Apple-D (Delete) command lets you delete unwanted records. To delete a record in single record layout mode, you get the record on the screen, issue an Apple-D and respond "Yes" to the "Delete current record?" prompt at the bottom of the screen.

You should work in multiple record layout mode if you have to delete more than one record. Use the Apple-Z command to get the multiple record layout display on the screen, put the cursor on the first record you want to delete, and issue an Apple-D. AppleWorks lets you use the Arrow Keys to delete a series of consecutive records in one operation from the multiple record layout screen.

Try this exercise that has you delete all blank records from the data base file and lets you use what you learned about the Record Selection Rules and Delete commands:

1. Issue an Apple-S command to save your work.
2. Display your address file in multiple record layout.
3. Issue an Apple-R command and indicate you want to select all records where the FNAME category is blank *and* where the LNAME category is blank. Then press the Escape Key to invoke the command.
4. Any blank records in the file will appear on the screen now. Issue an Apple-D command and delete all the blank records.
5. Issue another Apple-R command and indicate you want to select all the records.
6. Issue an Apple-S command to save your file without the blank records.

Modifying Existing Records

Of course, AppleWorks also lets you modify existing records. You use the Apple-F or Apple-R commands to display the record on the screen, then enter new data or correct existing data in the record. Since you already know how to select records, I will concentrate on the commands you use to modify an existing record.

First, remember that you can change an entry in either the multiple record or single record layout mode. The process is similar:

1. Press the Tab, Apple-Tab, Up or Down Arrow Keys, or Return Key to move the cursor to the category you want to change.
2. There are two ways to replace existing data:
 A. You can overwrite the existing data with the overwriting cursor (use the Apple-E command to switch between the inserting and overwriting cursors), or
 B. Use the Apple-Y command to "yank" out the existing data, then use either the inserting or overwriting cursor to enter data into the now-blank category.
3. Remember to issue an Apple-S command to save the data you just entered into the data base file.

Conclusion

This article describes the basics of managing a data base file. You learned how to rearrange records in the file, how to select and delete specific records, how to insert new records, and how to change the data in existing records. Eventually, you will learn techniques that make it easier to enter and maintain data in an AppleWorks data base file; this article covered the basics.

Next month I will describe how to generate data base reports.

Late News:

The **NAUG** Public Domain Library now includes the AppleWorks 3.0 Patch Disk. This bootable disk, donated by Mark Munz and Randy Brandt, installs patches that correct known problems with AppleWorks 3.0. The AppleWorks 3.0 Patch Disk costs $4 plus $2 s/h from **NAUG**.

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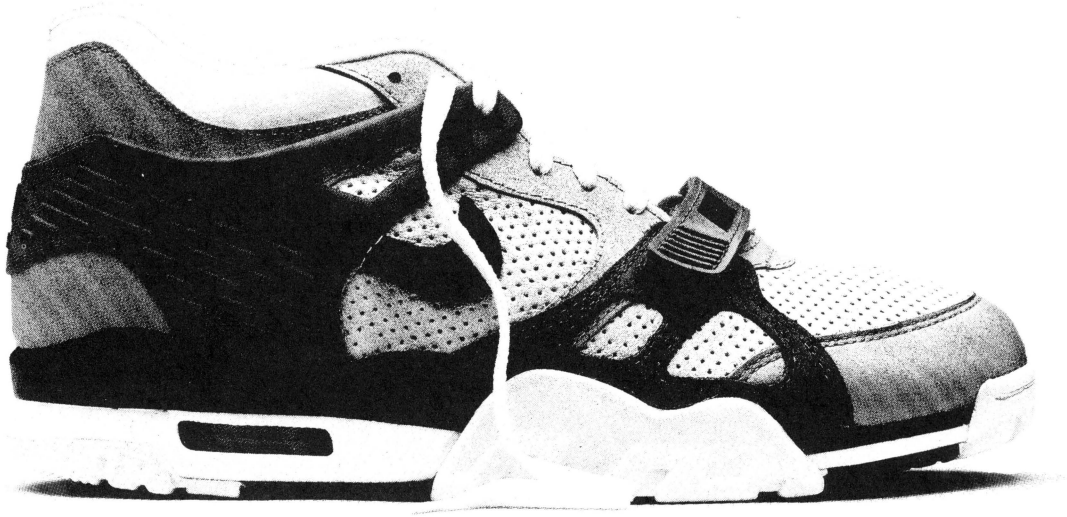
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AppleWorks and the LaserWriter: An Advanced Discussion — Part 3

by John Link and Warren Williams

This is the fifth in a series of articles designed to help you use a LaserWriter printer with AppleWorks. This month, the authors describe how to enhance AppleWorks so the program can produce full justification and proportional spacing using the attractive Palatino font.

Last month, we described how to modify Apple Computer's ImageWriter Emulator program so it produces output in Palatino. We believe that Palatino is a more attractive font than the standard Times output normally produced by AppleWorks on a LaserWriter. However, neither Times nor Palatino match the size of the proportional font built into the ImageWriter; you must modify AppleWorks so it can accurately track the length of each line it prints.

Figure 1: Sample Output from a LaserWriter

FOREVER KITSCH

Oddities... Curiosities... Surely they have something to do with art. The desire for high class oddities is not new in sophisticated society. Artists and art lovers have always found them interesting. The eighteenth century English constructed ruins in their gardens, which they viewed through smoked glass, to make them look older and more romantic. The French introduced high class kink when they gave us the Marquis de Sade who, twisted as he was, reeked of education and cultivation. Other times have met this need in other ways. What is new in our time is that the odd and freakish--when they conform to mannerisms defined by the avant-garde--enjoy the status of the most serious art, and are preferred over any other manifestation of culture.

In this article, we describe how to make those changes. When you are done, you will be able to print AppleWorks word processor documents in attractive, proportionally spaced and fully justified Palatino output on your LaserWriter. (See the sample in *Figure 1*.)

To get fully justified output in Palatino, you must patch AppleWorks so it knows the width of the Palatino characters. Then you must install a two-byte patch that adjusts for the slight difference in the average horizontal dot density between Palatino on the LaserWriter and the ImageWriter fonts.

We will use Applesoft BASIC to make these patches to AppleWorks. Readers who want to install these patches without keying them in can get the patches on a self-booting disk prepared by the principal author of this article. That disk, called the AppleWorks/LaserWriter Patch Disk, is available from **NAUG**'s Public Domain Library ($4 plus $2 s/h).

We will assume you modified Apple's ImageWriter Emulator as described in last month's article and that you use your LaserWriter on an AppleTalk network.

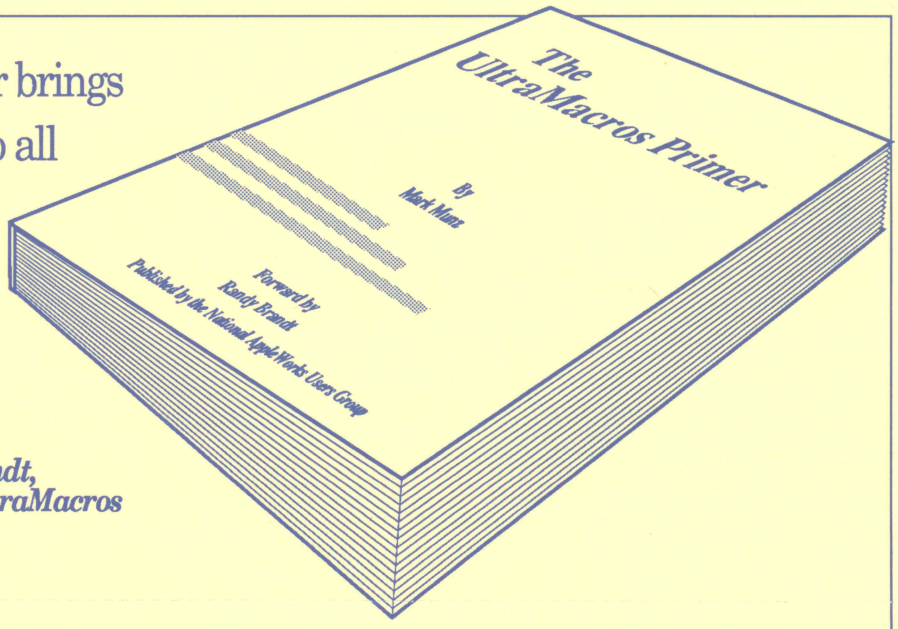
Some Background

AppleWorks keeps track of the width of each proportionally spaced character in a table. AppleWorks 2.1 and earlier store the table in the SEG.PR file; AppleWorks 3.0 copies the table from SEG.PR into SEG.ER and then uses the SEG.ER version of the table. AppleWorks uses the character widths in conjunction with the constants for "average dots per inch" to determine how many characters to print on a line and how many spaces to insert to fully justify the right margin.

On average, the characters in the Palatino font are somewhat wider than the corresponding characters

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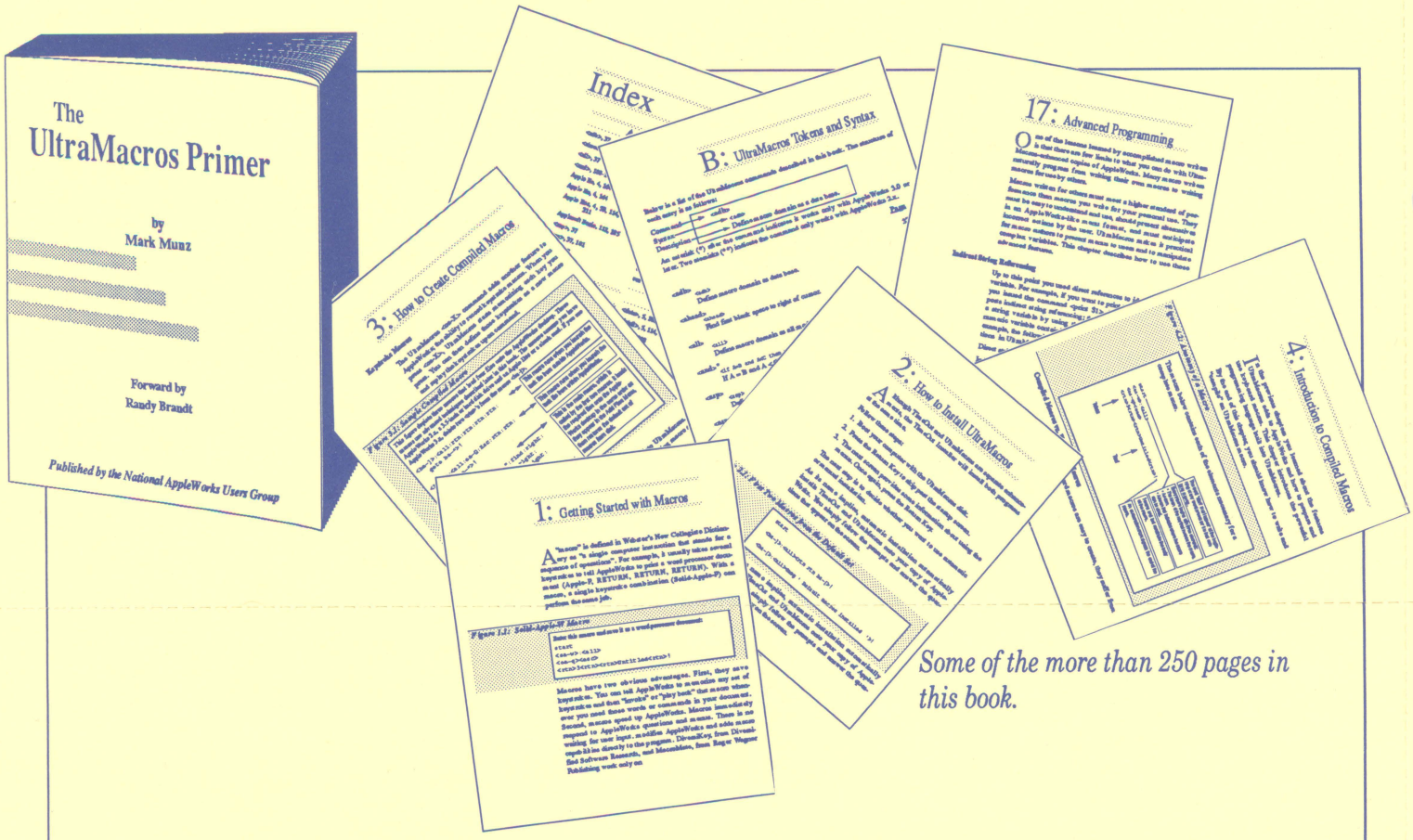
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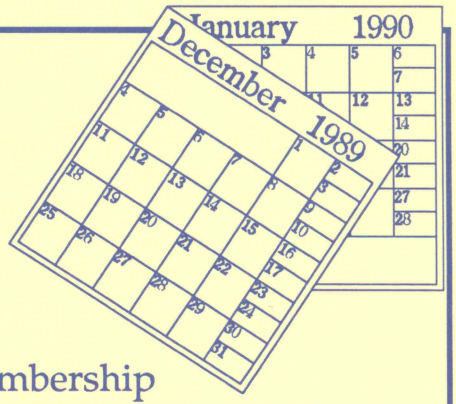
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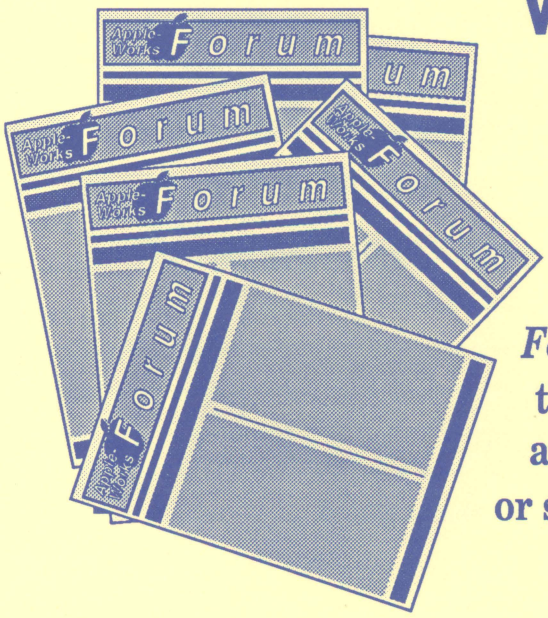
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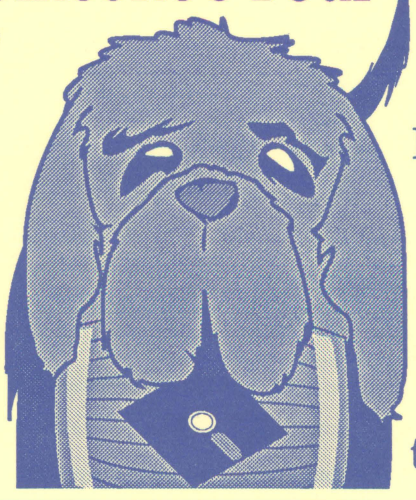
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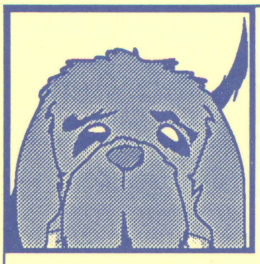
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Figure 2: Table of Character Widths

Character:	A	B	C	D	E	F	G	H	I	J	K	L	M
IW font:	16	15	14	15	15	15	14	15	9	13	12	13	17
Palatino:	18.8	14.6	17.0	18.7	14.6	13.2	18.3	20.0	8.1	8.0	17.3	14.6	22.7
Character:	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
IW font:	16	15	13	16	15	12	14	15	16	17	11	14	11
Palatino:	20.0	19.0	14.4	19.0	16.0	12.6	14.6	18.8	17.2	24.0	16.0	16.0	16.0
Character:	a	b	c	d	e	f	g	h	i	j	k	l	m
IW font:	12	12	10	12	12	10	12	12	8	7	10	8	16
Palatino:	11.9	13.1	10.7	14.6	11.6	8.0	13.3	13.9	7.0	5.6	13.3	7.0	21.2
Character:	n	o	p	q	r	s	t	u	v	w	x	y	z
IW font:	12	12	12	12	10	12	10	12	12	16	12	12	10
Palatino:	13.9	13.1	14.3	13.3	9.6	10.2	7.6	14.3	13.4	20.0	12.4	13.3	12.2
Character:	1	2	3	4	5	6	7	8	9	0	!	@	#
IW font:	12	12	12	12	12	12	12	12	12	12	7	14	14
Palatino:	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	6.7	18.0	14.3
Character:	$	%	^	&	*	(	)	_	+	-	=	<	>
IW font:	12	16	12	13	12	7	7	17	12	12	12	12	12
Palatino:	12.0	20.2	14.3	18.7	9.3	8.0	8.0	12.0	14.3	8.0	14.4	14.4	14.4
Character:	?	/	.	,	\|	\	~		{	}	[	]	"
IW font:	12	12	7	7	7	12	13	7	10	10	12	12	10
Palatino:	10.7	14.4	6.0	6.0	14.4	14.4	14.4	6.7	8.0	8.0	8.0	8.0	9.0
Character:	'	:	;	<space>									
IW font:	7	7	7	7									
Palatino:	6.7	6.0	6.0	6.0									

in the ImageWriter proportional fonts, even though the most frequently used character, the space, is 14% narrower. That leaves AppleWorks unable to correctly determine the number of characters to put in a printed line and the number of spaces to add to the line to achieve correct right justification. Therefore, you must patch AppleWorks' character width table for the Palatino sizes.

We determined the Palatino character widths empirically; by printing fifty repetitions of each proportional character in a line. We printed one set from a standard copy of AppleWorks on an ImageWriter, the other using the same copy of AppleWorks, but on a LaserWriter running an ImageWriter Emulator we patched to print in Palatino instead of Times. Then we measured the length of each line of ImageWriter output and created a ruler proportioned to that output with a scale from 1 to 35, where each unit represented "one unit of density". We then measured the Palatino output with this special ruler. *Figure 2* presents the table of character widths we measured for the ImageWriter proportional font and for Palatino from the LaserWriter.

Unfortunately, AppleWorks' character width table only allows for whole numbers; our patch will have to round the value for each Palatino character to the nearest whole number. AppleWorks stores the data as hexadecimal values, so we will enter the hexadecimal values of these numbers into AppleWorks.

Then we developed a patch in BASIC that will change the values in AppleWorks. The patch also meets AppleWorks' parameter that the high bit be set on some entries but not others.

It's Not Perfect

You will notice a significant improvement in the output from AppleWorks and your LaserWriter after you install these patches. However, the output will still not be perfect when you print with fully justified margins. Every two or three pages, AppleWorks will print a line that is too short.

We had to round some character widths in this table. In an average line, characters which are rounded up will be balanced by characters rounded down. Occasionally, this will not be the case, and AppleWorks will not correctly align the right margin. You can correct this problem either by adding a space between words somewhere on the line, or by hyphenating the last word in the line. That forces AppleWorks to recalculate the space needed by that line. On rare occasions, a correction to one line will create a problem in the following line and you have to adjust two consecutive lines.

In addition, patched versions of AppleWorks 3.0 will not correctly implement some of the new enhancements to AppleWorks' tabbing system. There are no problems when you insert a single tab at the beginning of a paragraph or when you issue an Apple-Tab to use AppleWorks' earlier approach to tabs. However, you will not get correct output if you use center tabs, right tabs, or multiple left tabs in a line, although the output is better than that produced by unenhanced copies of the ImageWriter Emulator. You will get better results with AppleWorks 3.0 if you restrict tabs to lines containing numerals, dollar signs, and periods. Alternatively, you can use the monospaced Courier font for heavily tabbed lines containing both text and numbers.

How to Install the Patches

Here are the step-by-step procedures to install these patches. You will need a copy of AppleWorks, your System Utility Disk, and two blank disks. Follow these steps:

1. Use a disk copy program to make a backup of your working AppleWorks disk. Do all your work on this backup copy.
2. Create a bootable disk that contains just ProDOS and BASIC.SYSTEM. To do that, format a blank disk and name the volume /BASIC. Then copy the file named PRODOS from your AppleWorks Startup Disk onto the BASIC disk. Finally, copy the file named BASIC.SYSTEM from your System Disk onto your new BASIC disk.
3. Boot up AppleWorks and delete all the printers from the Printer Menu.
4. If you use AppleWorks 2.1 or earlier, add an ImageWriter to the Printer Menu. If you use AppleWorks 3.0, add an ImageWriter II printer. Tell AppleWorks the printer is in slot #7, the slot you usually use to communicate with a LaserWriter over an AppleTalk network.
5. Quit AppleWorks.
6. Insert your AppleWorks Startup Disk in Drive 2.
7. Boot your computer with the BASIC disk. The Applesoft "]" prompt will appear on the screen.
8. Press the Escape Key and then the number "8". That will change your display to 80-column mode and will make it easier to enter the text below.
9. You must set the prefix so BASIC will find your AppleWorks disk. Type:

   ```
   PREFIX /APPLEWORKS
   ```

 and press the Return Key now and after every line you type below.
10. Enter the Apple Monitor by typing:

    ```
    CALL -151
    ```

 The screen will display an asterisk to indicate you are at the Monitor level.
11. Now you will enter the patch that modifies the proportional font table. Type the following lines and check your work carefully before pressing the Return Key after each line. Retype the line if you detect an error after pressing Return. The final command (3DØG) will return you to BASIC.

    ```
    3ØØ:86 87 Ø9 ØE ØC 94 13 Ø7 Ø8 Ø8 Ø9 ØE 86 Ø8 86 ØE
    31Ø:ØC ØC ØC ØC ØC ØC ØC ØC ØC ØC 86 86 ØE ØE ØE 8B
    32Ø:12 13 ØF 11 13 ØF ØD 12 14 Ø8 Ø8 11 ØF 17 14 ØF
    33Ø:ØE 13 1Ø ØD ØF 13 11 18 1Ø 1Ø 1Ø Ø8 ØE Ø8 ØE ØC
    34Ø:Ø7 ØC ØD ØB ØF ØC Ø8 ØD ØE Ø7 Ø6 ØD Ø7 15 ØE ØD
    35Ø:ØE ØD ØA ØA Ø8 ØE ØD 14 ØC ØD ØC Ø8 ØE Ø8 ØE
    3DØG
    ```

How to Use an ImageWriter with Your Enhanced AppleWorks

AppleWorks 3.0 creates a new proportional font table in SEG.ER each time you add an ImageWriter or other printer capable of proportional fonts to your Printer Menu. That makes it easy to customize the proportional font table for one printer on the list without affecting other printers. The trick is to remove all the printers from the Printer Menu, install an ImageWriter II, make the patches described in this article, and then add additional printers to the Printer Menu.

Earlier versions of AppleWorks contain only a single proportional fonts table, and the program refers to that table whenever you issue a P1 or P2 command for any printer. As a result, you cannot change the values in that table and print correctly in both proportional fonts on an ImageWriter and in Palatino on a LaserWriter.

If you use AppleWorks 2.1 or earlier, the only way to get correct proportionally spaced output from both a LaserWriter and an ImageWriter is to maintain two copies of SEG.PR under different file names on your AppleWorks Startup Disk. Then rename the files as necessary and re-start AppleWorks when you want to switch between proportional fonts on the ImageWriter and Palatino on the LaserWriter.

12. Next, you must save these entries in place of the original values on the AppleWorks disk. Enter the line below that is appropriate for your version of AppleWorks.

 AppleWorks 1.3 and 2.0:
 Type: `BSAVE SEG.PR,TSYS,A$3ØØ,L95,B$D36`

 AppleWorks 2.1:
 Type: `BSAVE SEG.PR,TBIN,A$3ØØ,L95,B$D68`

 AppleWorks 3.0:
 Type: `BSAVE SEG.ER,TBIN,A$3ØØ,L95,B$336`

Adjust Average Horizontal Dot Density

Now that you patched the proportional fonts table in AppleWorks, you must patch the average horizontal dot density for those fonts. Continue as follows:

13. Type

    ```
    CALL -151
    ```

 to return to the Monitor.

14. Now enter the following patch and the BSAVE command that will save that patch in the appropriate file on the AppleWorks disk.

 AppleWorks 1.3 and 2.0:

    ```
    3ØØ:9E 8E
    3DØG
    BSAVE SEG.PR,TSYS,A$3ØØ,L2,B$3BF
    ```

 AppleWorks 2.1:

    ```
    3ØØ:9E 8E
    3DØG
    BSAVE SEG.PR,TBIN,A$3ØØ,L2,B$3F1
    ```

 AppleWorks 3.0:

    ```
    3ØØ:9E 8E
    3DØG
    BSAVE SEG.ER,TBIN,A$3ØØ,L2,B$137
    ```

Conclusion

Previous articles in this series described how to write a PostScript program to get information about your printer, how AppleWorks uses the ImageWriter Emulator, and how to modify the Emulator so it produces Palatino output in place of Times. This month, you learned how to patch AppleWorks so the program can print in the proportionally spaced Palatino font with fully justified right and left margins.

So far, this work requires you to connect to the LaserWriter through an AppleTalk network. Next month, we will describe how to get fully justified, proportionally spaced Palatino output without using AppleTalk. This is particularly important to owners of Apple IIe, IIc, and IIc Plus computers and to owners of Apple clones who want to produce high quality output from AppleWorks.

[John Link is a Professor of Art at Western Michigan University. He is the developer of SuperPatch and is an AppleWorks consultant.]

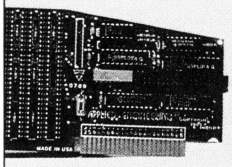
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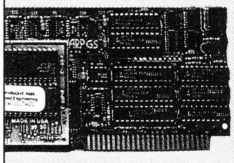
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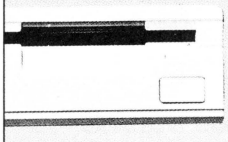
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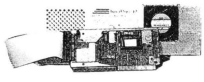
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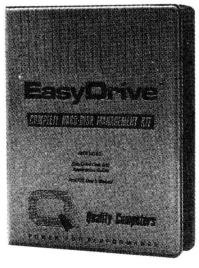
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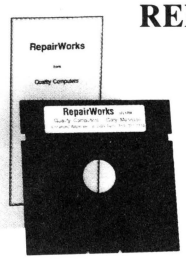
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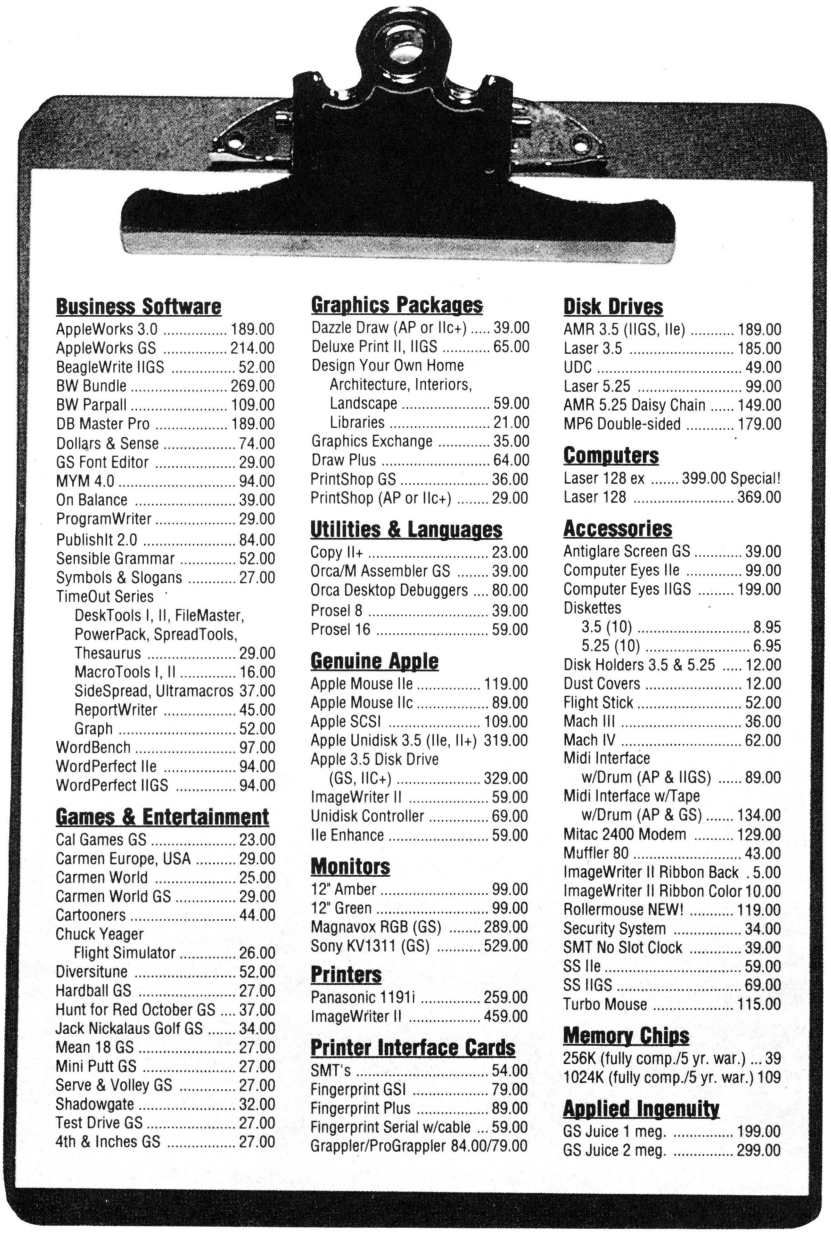
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Claris Releases Significant Upgrade to AppleWorks GS

Claris Corporation recently announced the release of version 1.1 of AppleWorks GS. According to Claris, the new version of the program offers a ten-fold increase in performance, including significantly faster loading and improved screen updating that lets you scroll more quickly through documents. AppleWorks GS gets much of its improved speed from GS/OS 5.02, which comes with the program.

In addition to its faster speed, version 1.1 offers a number of other enhancements, including the ability to read AppleWorks 3.0 files, faster recalculation of spreadsheets, a new graphic Control Panel, the ability to manage more fonts, and the capability to create accents and diacritical marks used in foreign languages, and special characters. Version 1.1 also includes numerous changes that enhance the reliability and functionality of the program.

While earlier versions of AppleWorks GS required 1.25 megabytes of RAM, version 1.1 will run on the 1.125 megabytes of memory that comes standard on the new "ROM 3" Apple IIGS. The program will run on a system with a single 3.5-inch disk drive, but will require disk swaps unless you have two 3.5-inch drives or a hard drive.

Although each user on an AppleShare network needs their own copy of AppleWorks GS, network users can share files and printing resources available on the network.

AppleWorks GS 1.1 stores data base documents in a different format than earlier versions of the program. According to Claris, the new format is more compact and reliable than the earlier versions. You use a stand-alone file conversion utility provided with the program to convert existing AppleWorks GS data base files into the new format. Data base files saved under version 1.1 cannot be read by earlier versions of AppleWorks GS.

AppleWorks GS 1.1 has a suggested list price of $299. Registered AppleWorks GS owners can upgrade to version 1.1 for $29. Schools can upgrade 10-packs of AppleWorks GS for $119; schools with site licenses will receive the upgrade free of charge. The upgrade package includes four disks (System, Program, Tools, and Utilities) and a well-written 60-page upgrade manual that describes how to install the system and program, how to use the new features in version 1.1, and includes corrections and enhancements to the original documentation.

AppleWorks 2.x and 3.0 owners can upgrade to AppleWorks GS 1.1 for $99 and schools can upgrade AppleWorks 10-packs for $399. These upgrade packages include the disks, the original documentation, and the version 1.1 upgrade manual.

For more information and upgrade forms, call Claris at (800) 544-8554.

AppleWorks GS Disks in NAUG's Library

NAUG's Public Domain Library now includes 19 disks with more than 490 AppleWorks GS home, business, library, and school templates. The disks include AppleWorks GS conversions of most of the templates on the following disks from **NAUG**'s library (an asterisk indicates that two AppleWorks GS disks cover the contents of the original): NAUG HOME 01*, 02, and 03, NAUG EDUC 01, TAWUG BUSINESS 01, FINANCE 01, HOUSEHOLD 01, HOME FINANCE 01, SCHOOL 01, For Sale By Owner, AppleWorks User's Rolodex, and ALUG 01*, 02*, 03*, and 04. Each 3.5-inch disk costs $6 each plus $2 s/h per order, from **NAUG**. See **NAUG**'s Public Domain Catalog for more information ($5; includes a $2 rebate coupon). Our thanks to **NAUG** member Karl Schober for converting, enhancing, and testing these useful templates.

How to Debug Your Macros

by Mark Munz

This is the sixteenth in a series of articles that describe how to use TimeOut UltraMacros. This month, Mr. Munz suggests techniques to help you find and correct errors in your macros. Next month he concludes this series with a summary of the commands and tokens described in these articles.

As you proceeded through the exercises in this series, you probably made occasional errors when you typed a macro. Sometimes you found these errors as you proofread the macro. At other times you discovered your errors while compiling or running the macro.

Testing and debugging is an important step in creating any program, and compiled macros are no exception. The testing and debugging process grows in complexity and difficulty as you add variables and sophistication to your macros.

In this article, I will describe some techniques to help you find and correct your errors. While I can suggest the procedures to follow, much of debugging is an art. You will learn the art form as you gain experience with the process.

Syntax and Logic Errors

In general, there are two steps to debugging any program. First, you check the syntax of the commands. Syntax errors in one or more commands halts operation of the UltraMacros Compiler and keeps a macro from compiling. Once the macro runs, you can start the more demanding task of identifying the errors in the logic and structure of the macro.

The primary tool to help you debug the syntax of a macro is the UltraMacros Compiler. As you undoubtedly discovered, the compiler checks the syntax of every statement and tries to identify the nature and approximate location of any errors.

Syntax errors are generally of two types: typographical errors that are easy to fix, and incorrect syntax for a command.

Here are three of the most frequently occurring syntax problems:

1. Forgetting a colon after the text of a message. UltraMacros requires a colon after the closing single or double quotation at the end of a message. The correct syntax for message commands is: <msg 'This is the message':stop> *not* <msg 'This is the message' stop>.
2. The incorrect number of parameters for a command. Most often this occurs with a command that requires three parameters such as the <screen> command.
3. The wrong type of parameter. Most frequently this involves specifying a numeric variable as a parameter when the command expects a string variable, or specifying a numeric *value* when the command expects a *variable*. For example, the <posn> command requires that you specify two numeric variables as parameters. The command <posn 1,1> yields a syntax error; the correct statement is <posn A,B>.

Next month's article will include a summary of the correct syntax of each UltraMacros command and an example of the command. You can save time by referring to this summary or to the reference section of the UltraMacros manual when you cannot identify the cause of an UltraMacros Compiler syntax error.

Logic Errors

Identifying the source of errors in the logic of a macro is the biggest challenge in debugging a program. Logic errors can be classified into four

Figure 1: Macros that Display Contents of all Variables

1A: AppleWorks 3.0

```
<ba-%>:<all:oa-Q:cls:
   msgxy 1Ø,2:  msg "A = " + str$ A :
   msgxy 1Ø,3:  msg "B = " + str$ B :
   msgxy 1Ø,4:  msg "C = " + str$ C :
   msgxy 1Ø,5:  msg "D = " + str$ D :
   msgxy 1Ø,6:  msg "E = " + str$ E :
   msgxy 1Ø,7:  msg "F = " + str$ F :
   msgxy 1Ø,8:  msg "G = " + str$ G :
   msgxy 1Ø,9:  msg "H = " + str$ H :
   msgxy 1Ø,1Ø: msg "I = " + str$ I :
   msgxy 25,2 : msg "J = " + str$ J :
   msgxy 25,3 : msg "K = " + str$ K :
   msgxy 25,4 : msg "L = " + str$ L :
   msgxy 25,5 : msg "M = " + str$ M :
   msgxy 25,6 : msg "N = " + str$ N :
   msgxy 25,7 : msg "O = " + str$ O :
   msgxy 25,8 : msg "P = " + str$ P :
   msgxy 25,9 : msg "Q = " + str$ Q :
   msgxy 25,1Ø: msg "R = " + str$ R :
   msgxy 4Ø,2 : msg "S = " + str$ S :
   msgxy 4Ø,3 : msg "T = " + str$ T :
   msgxy 4Ø,4 : msg "U = " + str$ U :
   msgxy 4Ø,5 : msg "V = " + str$ V :
   msgxy 4Ø,6 : msg "W = " + str$ W :
   msgxy 4Ø,7 : msg "X = " + str$ X :
   msgxy 4Ø,8 : msg "Y = " + str$ Y :
   msgxy 4Ø,9 : msg "Z = " + str$ Z :
   msgxy Ø,12: msg "$Ø=" + $Ø :
   msgxy Ø,13: msg "$1=" + $1 :
   msgxy Ø,14: msg "$2=" + $2 :
   msgxy Ø,15: msg "$3=" + $3 :
   msgxy Ø,16: msg "$4=" + $4 :
   msgxy Ø,17: msg "$5=" + $5 :
   msgxy Ø,18: msg "$6=" + $6 :
   msgxy Ø,19: msg "$7=" + $7 :
   msgxy Ø,2Ø: msg "$8=" + $8 :
   msgxy Ø,21: msg "$9=" + $9 :
   stop>! { note: press Escape to restore screen }
```

1B: AppleWorks 2.x

```
<ba-&>:<all:
oa-Q:esc:rtn>3<rtn:rtn>Variables<rtn:right:rtn:oa-9:
        print "A = " + str$ A : rtn :
        print "B = " + str$ B : rtn :
        print "C = " + str$ C : rtn :
        print "D = " + str$ D : rtn :
        print "E = " + str$ E : rtn :
        print "F = " + str$ F : rtn :
        print "G = " + str$ G : rtn :
        print "H = " + str$ H : rtn :
        print "I = " + str$ I : rtn :
        print "J = " + str$ J : rtn :
        print "K = " + str$ K : rtn :
        print "L = " + str$ L : rtn :
        print "M = " + str$ M : rtn :
        print "N = " + str$ N : rtn :
        print "O = " + str$ O : rtn :
        print "P = " + str$ P : rtn :
        print "Q = " + str$ Q : rtn :
        print "R = " + str$ R : rtn :
        print "S = " + str$ S : rtn :
        print "T = " + str$ T : rtn :
        print "U = " + str$ U : rtn :
        print "V = " + str$ V : rtn :
        print "W = " + str$ W : rtn :
        print "X = " + str$ X : rtn :
        print "Y = " + str$ Y : rtn :
        print "Z = " + str$ Z : rtn :
        print "$Ø=" + $Ø : rtn :
        print "$1=" + $1 : rtn :
        print "$2=" + $2 : rtn :
        print "$3=" + $3 : rtn :
        print "$4=" + $4 : rtn :
        print "$5=" + $5 : rtn :
        print "$6=" + $6 : rtn :
        print "$7=" + $7 : rtn :
        print "$8=" + $8 : rtn :
        print "$9=" + $9 : rtn :
        stop>!
```

types: Using the wrong operation, specifying an incorrect sequence of operations, incorrect branching, and storing or using the wrong variable.

All these errors can result in you storing incorrect values in one or more UltraMacros variables, and the key to diagnosing the errors is to determine the value stored in each variable. You can then use those values to learn the source of the error.

There are at least three ways to determine the contents of each variable when a macro fails. The first is to use the TimeOut Debug module. The Debug module for UltraMacros 1.x and 2.x is on the TimeOut MacroTools disk. The module for UltraMacros 3.x is on the MacroEase disk. *[Ed: MacroEase will be available next month.]*

Debug lets you display and change the contents of every variable. In addition, Debug displays addi-

tional information including whether there are any sleeping macros and which printer is active.

Another technique is to insert <stop> commands in a macro to halt its operation and use <msg> commands to print out the contents of the variables when the macro stops.

Finally, you can use the macros in *Figure 1A* and *1B* as subroutines that will stop your macro and display the contents of each variable. The <ba-%> macro in *Figure 1A* uses the <cls> and <msgxy> commands and only works with UltraMacros-enhanced copies of AppleWorks 3.x. Note that the <ba-%> macro in *Figure 1B* creates a word processor file that contains a table of current values for the available macros.

You should type either of these macros into the word processor file containing your macro source file and compile the macro with your regular macro set. Then you can insert a <ba-%> or <ba-&> command in your macro to call the appropriate debugging macro when you want to see the contents of the different variables. Either macro will display the contents of every variable and then stop.

Conclusion

Any programming activity is a mysterious blend of art and science. In this article, I described a series of steps and tools that use "scientific" procedures to help you locate the source of your errors. But the art of debugging your macros remains up to you.

[Mark Munz, the author of the AW 3.0 Companion, TimeOut TextTools, MacroTools II, MacroEase, and Late Nite Patches, is a programmer with Beagle Bros, publishers of TimeOut UltraMacros.]

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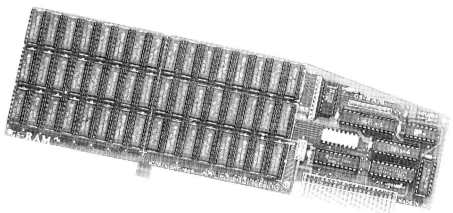
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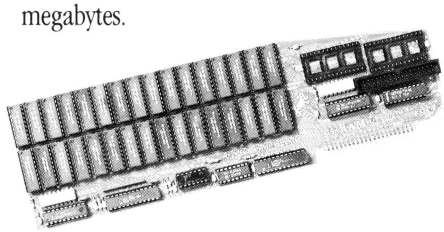
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How to Schedule Events with AppleWorks

by Duane P. Smith

This article describes how to integrate the AppleWorks data base and spreadsheet modules to help reserve concert seats. You can apply these techniques to plan any event where the demand for participation exceeds the supply of available space or tickets.

Learning how to use AppleWorks to solve everyday problems is a continuing challenge. Even after using AppleWorks for several years, I still wake up with new inspirations to help me use this tool to solve yet another problem. The following is an example of such a phenomenon.

The Problem

One of my responsibilities at work is to schedule elementary school students to attend free concerts in the 2,400 seat Michigan State University Wharton Center for the Performing Arts. I send announcements of these concerts to approximately 135 elementary schools in the area, and the requests for tickets far exceed the number we can supply. Therefore, I try to use a selection procedure that is fair to the schools that want to send students to these events.

The easiest approach is to accept reservations on a first come, first served basis. However, announcements are sent by mail and school courier service, and are sent to schools that may be anywhere from one block to 60 miles from the Music Office. In addition, schools return their "Request for Seating" forms by mail, courier service, or in person. These variables make the first come, first served method inequitable, despite its simplicity and apparent fairness.

In addition to keeping a record of the number of seats requested for each concert, I need to know how many students within my district need school bus transportation. I also need to give special consideration to those schools that I could not accept in the past because of seating or transportation limitations. The key to a workable system is keeping accurate records to insure that as many students as possible can attend one of the concerts I schedule each year.

The AppleWorks Solution

I use an AppleWorks data base file with the addresses of all schools in this region; I send them flyers prepared with the AppleWorks word processor. The flyer contains a description of the concert, how to apply for seating and transportation, and a reservation form. When I receive a returned reservation form, I date-stamp the form and note the time it arrived and how it was delivered (walk-in, mail, or courier). I also assign a three-digit priority number to each request. One digit of that number represents how many times the school was turned down for the previous three concerts, the second digit indicates how many times they could not bring all their students because of lack of transportation, and the third digit reflects how many of the previous three concerts they wanted to attend.

I enter this information into an AppleWorks data base file that I establish for the current concert. Since I use a template to generate each new concert data base, every date base file has the same structure. Thus, I can combine the file for the current concert into a cumulative data base file of all the concerts in the past five years. *Figure 1* shows the single record layout screen for this file.

How to Use the Template

First, I issue an Apple-V command and set default entries for the CONCERT DATE and CONCERT TITLE categories.

When entering data, I type "WALK-IN", "MAIL", or "COURIER" in the RECEIVED VIA category.

For now, I leave the REQUEST STATUS category blank; I enter either "ACCEPTED" or "WAITING LIST" in that category after I determine if the school can send students to the concert.

The "X" categories at the bottom of the screen are extra categories I use when I transfer data to the spreadsheet module. I will describe that process later in this article.

Figure 1: Entry Screen for Booking Concerts

```
File: MAR 13                  INSERT NEW RECORDS     Escape: Review/Add/Change

Record  1 of  1
================================================================================
       SCHOOL NAME: -
    CONTACT PERSON: -                          PHONE NO.: -
           ADDRESS: -
              CITY: -                                STATE: -  ZIP: -
      CONCERT DATE: -                       CONCERT TITLE: -
NO.SEATS REQUESTED: -                    NO.BUS REQUESTED: -
         DATE RC'D: -                          TIME RC'D: -
       RECEIVED VIA: -                     PRIORITY NUMBER: -
    REQUEST STATUS: -




        X: -X: - X: - X: - X: - X: - X: - X: - X: - X: - X: - X: - X: -
--------------------------------------------------------------------------------
```

While entering data, I keep the current concert file and cumulative file of all previous concerts on the desktop. I use the Apple-F command to find the history of concert attendance for each school and I use that data to assign a PRIORITY NUMBER for each request. Later, when I complete the file for the concert, I copy the contents of the current concert file to the clipboard and from there to the cumulative file for future reference.

Once I receive and enter the applications, I use AppleWorks to arrange the records in order based on the assigned priorities. I give the PRIORITY NO. the greatest weight, the DATE RC'D the second highest weight, and the TIME RC'D the least weight. So I issue an Apple-A command and arrange the records first by TIME RC'D, then by DATE RC'D, and finally, by PRIORITY NO. This puts the records in the correct order. *[Ed: The Apple-A command in AppleWorks 3.0 lets you arrange the records by all three categories in one operation.]*

Now I set the cut-off point for the concert. To do that, I need a running calculation of the total number of students starting at the top of the list. That is, I need to know how many students are in the first school, the first two schools combined, the first three schools combined, and so on. Then I send acceptance notices to the schools with the first 2,400 students and put the remaining schools on a waiting list.

Unfortunately, I cannot get running totals in the data base module; I must transfer the data into a spreadsheet to calculate the totals, so I will need both the data base and the spreadsheet file on the AppleWorks desktop.

The Spreadsheet Template

I use a spreadsheet template called "CONCERTBOOKING" to do the calculations and help determine the cutoff point. *Figure 2* depicts the spreadsheet template. This template includes the correct column widths, the headings, the necessary formatting commands, and the three rows of text depicting the cutoff point. I will move this text to the correct location once I establish a cutoff point.

The template does not contain the formulas that calculate the cumulative totals. While I could put those formulas in the template and move them to the correct location after I transfer the data into this file, I find it easier to enter and copy the formulas after I transfer the data.

Now I load the CONCERTBOOKING spreadsheet template on the AppleWorks desktop, issue an Apple-N command, and change the name to the date of the concert followed by the letters SS to differentiate the spreadsheet from the data base file. For example, the spreadsheet might be named "april 18.ss".

Transferring Data to the Spreadsheet

How I transfer the data into the spreadsheet depends on whether I'm using AppleWorks 3.0 or an earlier version of AppleWorks.

Figure 2: Spreadsheet Template

```
    ==========A==========B==C==D==E==F==G==H==I==J==K===L===M===N=O=P===Q===R=====S======T
  1|                                LANSING SCHOOL DISTRICT
  2|                                     MUSIC OFFICE
  3|
  4| CONCERT BOOKING FOR:
  5|
  6|                           |SEAT |CUM. |BUS  |CUM. |      |       |   | RC'D  |  REQUEST   |
  7|                           |REQ. |TOT. |REQ. |TOT. |DATE  | TIME  |PR.|  VIA  |   STATUS   |
  8| ==========================|=====|=====|=====|=====|======|=======|===|=======|============|
  9|
 10| ------------------------------------------------------------------------------------------
 11|                           * * * * C U T O F F   P O I N T * * * *
 12| ------------------------------------------------------------------------------------------
 13|
 14|                                        TOTAL NUMBER OF SEATS REQUESTED  =
 15|                                    TOTAL NUMBER OF BUS SEATS REQUESTED  =
 16|
 17|   SEAT REQ. = No. of seats requested.
 18|   CUM. TOT. = The cumulative total of seats requested.
 19|    BUS REQ. = The number of students needing bus transportation (Lansing students only).
 20|   CUM. TOT. = The cumulative total of bus seats requested.
 21|  RCPT. DATE = The date we received the request.
 22|  RCPT. TIME = The time of day we received the request.
 23|          PR = The priority number of this request.
 24|    RC'D VIA = The manner in which we received the request.
```

Figure 3: Data Base Report Format

```
File: MARCH 13                                                                          Page 1
Report: SPREADSHEET                                                                     08/20/89
SCHOOL NAME                  X NO.SEATS X X X NO.BUS X X X DATE RC'D. X TIME RC'D X PRIORITY X RECEIVED VIA X REQUEST  X
---------------------------- - -------- - - - ------ - - - ---------- - --------- - -------- - ------------ - -------- -
ALL CITY CHOIR PARENTS                50           0       MARCH 13       8:00 A      111        WALK-IN     ACCEPTED
ST. THERESE                           90           0       MARCH 15       2:00 P      342          MAIL      ACCEPTED
WINANS (WAVERLY)                     281           0       MARCH 15       2:00 P      342          MAIL      ACCEPTED
```

AppleWorks 2.1 or earlier: If I use AppleWorks 2.1 or earlier and do not have the TimeOut Data Converter, I must use DIF files to transfer the data from the data base file to the spreadsheet. I follow these steps:

1. I create a report format in the data base that matches the format in *Figure 3*. The "X's" represent blank categories I include in the report; I will replace all but two of those blank categories with vertical lines in the spreadsheet. I will replace one of the remaining categories with a column of formulas to calculate the cumulative count of students. I will replace another blank category with the cumulative count of students who need busses.
2. I issue an Apple-P command and "print" the report to a DIF file on the disk.
3. I return to the Main Menu, indicate I want to add a file to the desktop, and create a new spreadsheet from that DIF file. The spreadsheet looks incorrect on the screen because the column widths are wrong, but I don't bother reformatting the columns; I will immediately transfer this data to another spreadsheet.
4. I issue a Copy Command and copy the data to the clipboard.
5. I issue an Apple-Q command and bring the spreadsheet template on the screen.
6. Finally, I put the cursor in cell A9 and copy the data from the clipboard. Then I skip to the steps described in the section entitled "Finishing the Spreadsheet" later in this article.

TimeOut Data Converter: If I have AppleWorks 2.0 or 2.1 and TimeOut Data Converter (the file TO.CLIPBOARD on many TimeOut disks), I can transfer data directly from the multiple record layout in the data base to the spreadsheet module.

Figure 4: Completed Spreadsheet

```
    ============A============B==C==D==E==F==G==H==I==J==K===L===M===N=O=P===Q===R=====S======T
 1|                                  LANSING SCHOOL DISTRICT
 2|                                       MUSIC OFFICE
 3|
 4| CONCERT BOOKING FOR:  "KIDS KONCERT", APR. 18, 1989
 5|
 6|                            |SEAT |CUM. |BUS  |CUM. |      |       |   | RC'D  |  REQUEST   |
 7|                            |REQ. |TOT. |REQ. |TOT. |DATE  | TIME  |PR.|  VIA  |   STATUS   |
 8| ===========================|=====|=====|=====|=====|======|=======|===|=======|============|
 9| ALL CITY CHOIR PARENTS     |   50|   50|    0|    0|Mar 13| 8:00 A|111|WALK-IN|  ACCEPTED  |
10| ST. THERESE                |   90|  140|    0|    0|Mar 15| 2:00 P|342| MAIL  |  ACCEPTED  |
11| WINANS (WAVERLY)           |  281|  421|    0|    0|Mar 15| 2:00 P|342| MAIL  |  ACCEPTED  |
12| WINDEMERE VIEW (WAVERLY)   |  178|  599|    0|    0|Mar 15| 2:00 P|342| MAIL  |  ACCEPTED  |
13| LANSING CHRISTIAN          |   47|  646|    0|    0|Mar 16| 2:00 P|342| MAIL  |  ACCEPTED  |
14| GLENCAIRN (E. LANSING)     |  145|  791|    0|    0|Mar 16| 2:00 P|342| MAIL  |  ACCEPTED  |
15| NORTHWESTERN (EATON RAPIDS)|   90|  881|    0|    0|Mar 21| 2:30 P|342| MAIL  |  ACCEPTED  |
16| NORTH MIDDLE               |  117|  998|  117|  117|Mar 15| 3:30 P|343|WALK-IN|  ACCEPTED  |
17| AVERILL                    |  175| 1173|  175|  292|Mar 20| 9:00 A|343|COURIER|  ACCEPTED  |
18| NORTH ELEM.                |  115| 1288|  115|  407|Mar 20| 9:00 A|343|COURIER|  ACCEPTED  |
19| LEWTON                     |  278| 1566|  278|  685|Mar 20| 9:00 A|344|COURIER|  ACCEPTED  |
20| WILLOW                     |   80| 1646|   75|  760|Mar 21|10:30 A|344|COURIER|  ACCEPTED  |
21| REO                        |  205| 1851|  205|  965|Mar 15|11:40 A|433|WALK-IN|  ACCEPTED  |
22| CAVANAUGH                  |  200| 2051|  200| 1165|Mar 16| 4:00 P|433|WALK-IN|  ACCEPTED  |
23| MAPLE GROVE                |  121| 2172|  121| 1286|Mar 20| 9:00 A|434|COURIER|  ACCEPTED  |
24| WILCOX                     |   99| 2271|    0| 1286|Mar 15| 2:00 P|441| MAIL  |  ACCEPTED  |
25| MT. HOPE                   |  223| 2494|    0| 1286|Mar 16|11:45 A|441|WALK-IN|  ACCEPTED  |
26| ---------------------------------------------------------------------------------------------
27|                            * * * * C U T O F F   P O I N T * * * *
28| ---------------------------------------------------------------------------------------------
29| GIER PARK                  |   52|   52|    0|    0|Mar 20| 9:00 A|441|COURIER|WAITING LIST|
30| EUREKA CHRISTIAN           |    6|   58|    0|    0|Mar 14| 1:00 P|442| MAIL  |WAITING LIST|
31| FAIRVIEW                   |   51|  109|   51|   51|Mar 21|10:30 A|442|COURIER|WAITING LIST|
32| WEXFORD                    |   66|  175|   66|  117|Mar 21| 2:30 P|442|COURIER|WAITING LIST|
33| CORCORAN (PERRY)           |   70|  245|    0|  117|Mar 13| 4:00 P|442|WALK-IN|WAITING LIST|
34| EASTMINSTER C.D.C. (EL)    |   27|  272|    0|  117|Mar 14| 1:00 P|442| MAIL  |WAITING LIST|
35| LYONS                      |   57|  329|   57|  174|Mar 16| 8:00 A|442|COURIER|WAITING LIST|
36| PERRY BAPTIST              |   30|  359|    0|  174|Mar 16| 2:00 P|442| MAIL  |WAITING LIST|
37| FOREST VIEW                |   48|  407|    0|  174|Mar 20| 9:00 A|442|COURIER|WAITING LIST|
38| BEEKMAN                    |   25|  432|    0|  174|Mar 21| 2:00 P|442|COURIER|WAITING LIST|
39| STS. PETER & PAUL          |   52|  484|    0|  174|Mar 15| 2:00 P|443| MAIL  |WAITING LIST|
40|
41|                                        TOTAL NUMBER OF SEATS REQUESTED  = 2978
42|                                     TOTAL NUMBER OF BUS SEATS REQUESTED  = 1460
43|
44|   SEAT REQ. = No. of seats requested.
45|   CUM. TOT. = The cumulative total of seats requested.
46|    BUS REQ. = The number of students needing bus transportation (Lansing students only).
47|   CUM. TOT. = The cumulative total of bus seats requested.
48|  RCPT. DATE = The date we received the request.
49|  RCPT. TIME = The time of day we received the request.
50|          PR = The priority number of this request.
51|    RC'D VIA = The manner in which we received the request.
```

I follow these steps:

1. I get into multiple record layout in the data base file and copy all the records to the clipboard. I do not bother formatting the display; Data Converter ignores the multiple record layout format.
2. I invoke TimeOut and select Data Converter from the TimeOut Menu. Data Converter will convert the data base data on the clipboard into spreadsheet format.
3. Unfortunately, the data is in the order in which I originally defined the categories, not in the order it appeared on the data base screen. So I read the data into a new spreadsheet, reorganize the columns in that spreadsheet, and copy the data to the clipboard
4. I go to the renamed spreadsheet template, put the cursor in cell C9, and copy the data from the clipboard.

AppleWorks 3.0: If I have AppleWorks 3.0, it's easy to transfer the data from the data base file into the spreadsheet. I follow these steps:

1. I develop a multiple record layout format that matches the report format in *Figure 3*.
2. I get the multiple record layout format on the screen and copy all the records onto the AppleWorks clipboard.
3. I issue an Apple-Q command and switch to the renamed spreadsheet template. Then I put the cursor in cell A9 and copy the data from the clipboard.

Finishing the Spreadsheet

Once I have the data in the spreadsheet, I insert the vertical lines and formulas. Here is how:

1. I copy the vertical line characters at the top of columns B, D, F, H, J, L, N, P, R, and T to the bottom of the spreadsheet.
2. I enter the formula +C9 in cell E9 and the formula +G9 in cell I9.
3. I enter the formula +C10+E9 in cell E10 and the formula +G10+I9 in cell I10.
4. I copy the formulas from cells E10 and I10 to all the cells in their respective columns making all references "relative".
5. I use the Move Command to move the three lines of text containing the cutoff point indicator to the correct location in the spreadsheet.
6. I type the label "ACCEPTED" in cell S9 and copy the text into the appropriate cells.
7. I type the label "WAITING LIST" into column S immediately below the cutoff mark and copy the label into the remaining rows in the spreadsheet.

Figure 4 depicts the completed spreadsheet.

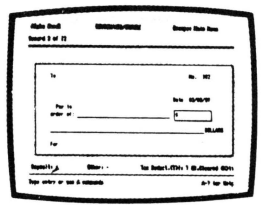
Then I print a copy of the spreadsheet and use the data base file to prepare pre-printed postcards to all the schools. I manually insert a checkmark on each card indicating whether the school was accepted for the concert or put on the waiting list.

Conclusion

While not many people have to book concerts, you can apply these techniques to any other task where the demand exceeds supply. These can be plays, athletic events, summer camp applications, orders for backordered merchandise, and waiting lists for teachers who want their classes to use the computer laboratory.

[Duane P. Smith is the Music and Computer Education Coordinator for the Lansing (MI) School District.]

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How to Get Help with Beagle Bros Enhancements

by Nanette Luoma

Each month, the ***AppleWorks Forum*** lists the member-volunteers who offer technical support for AppleWorks products. This month's list identifies the volunteers who can answer questions about Beagle Bros enhancements for AppleWorks. Next month's issue will contain a list of members who offer help with other AppleWorks-compatible software.

Beagle Bros

How to Use This List

Use this month's list to find help with Beagle Bros enhancements to AppleWorks. To the left of each volunteer's name is one or more numbers indicating the enhancements that consultant supports. Volunteers are listed alphabetically by state.

1 = DeskTools
2 = DeskTools II
3 = FileMaster
4 = Graph
5 = GS Font Editor
6 = Point to Point
7 = PowerPack
8 = QuickSpell
9 = ReportWriter
10 = SideSpread
11 = SpreadTools
12 = SuperFonts
13 = TeleComm
14 = Thesaurus
15 = UltraMacros

		City	Home	Work
Arizona				
1-4,7-15	Clay Evitts	Tucson	602-885-9789	602-296-5491
California				
1,6,8,15	Dan Balsley	San Ramon	415-829-5085	
8,12,14,15	Brian Blue	Danville	415-838-0997	415-954-6002
3,12,15	Don Farrar	Pleasant Hill	415-932-5509	
8	Jim Gentilucci	Los Osos	805-528-5049	
1-12,14,15	Terence P. Higgins	Hayward	415-887-7499	415-887-7499
1-3,10	Lucien LaCour	Woodland Hills	818-348-7787	
1-4,8,10-12,14,15	Berenice Maltby	Corona del Mar	714-640-7369	
1-3,5,7,8,10-12,14,15	Will Nelken	San Rafael	415-459-0845	415-456-1795
1-3	Jesus Orosco	Milpitas	408-270-1011	408-945-4344
Colorado				
1,8,14,15	Gary P. Armour	Littleton	303-933-9493	303-972-4665
8	John Lefebvre	Thornton	303-451-5558	303-457-2852
8,12,14,15	John Loren	Littleton	303-978-0603	
15	Dr. Larry Thaete	Boulder	303-939-9072	303-492-2717
Connecticut				
3,4,7,8,10-12,14,15	William Delaney	Enfield	203-745-4048	203-749-8391
12	Martin Knight	Middletown	203-346-9698	203-347-8594
Delaware				
15	W. Henry Linton, Jr.	Wilmington	302-478-3740	
Florida				
1-4,7,8,10-12,14,15	Michael R. Childers	Hollywood	305-966-5475	305-624-2400
1-5,7,8,10-12,14,15	Jeff Strichard	Ft. Lauderdale	305-587-9590	
1-4,7,8,10-12,14,15	Mike Ungerman	Oviedo	407-366-0060	407-366-0156
Illinois				
12,15	Mark Baniak	Park Ridge	312-825-6301	312-292-4116
1-3,8,12,14	Susan Husar	Chicago	312-631-5884	
15	Bowen E. Schumacher	Winnetka	312-501-3314	
Indiana				
1-4,7-10,12,14,15	Kevin Gold	Indianapolis	317-290-8948	317-543-7098
8	Laura J. Kelley	Gwynneville	317-763-7290	
Iowa				
3,4,8,10,12,15	Keith M. King	Ft. Madison	319-372-9521	
Kentucky				
3,4,8,10-12,15	Donald L. Corson	Louisville	812-256-3517	502-473-3083
Louisiana				
1,3,6-8,10,12-15	Charles Fryling, Jr	Baton Rouge	504-766-3120	504-388-1473
Maryland				
2-4,10,12,14,15	Raymond Greenberg	Darnestown	301-330-4912	301-353-4959
1-3,7-10,12-15	Ben Maser	Owings Mills	301-252-7884	301-887-0717
1-15	Ray L. Settle	Arnold	301-647-9192	301-887-0106
Massachusetts				
1-3,8,14	Donald McCabe	Westport	401-294-6256	508-636-2611
6,8,14	Chuck Scheffreen	Marblehead	617-631-2787	617-728-7553
15	Ed Stutsman	Shutesbury	413-259-1217	
Michigan				
4,6,8,10,14	Jim Anker	Auburn Hills	313-391-0033	313-544-5344
1,8,10,12,14,15	Pete Ross	Wayne	313-728-8269	
8,14	Deborah Williams	Grosse Ile	313-671-0267	313-675-1550
Minnesota				
1,8,12,15	David Ernest Johnson	Minneapolis	612-824-2728	612-824-2728
3,4,15	Dick Kenfield	Hopkins	612-938-4382	
Missouri				
1-5,7,8,10-12,14,15	Whit Crowley	Manchester	314-393-7955	
Nebraska				
1-15	Jim Corbin	Bellevue	402-291-7285	402-331-7312
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Beagle Bros...

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1-3,7-12,14,15	Phil Kirkpatrick	Keene		603-352-0640
New Jersey				
1-4,6-15	Pete Crosta	Nutley	201-677-4050	201-667-6369
New Mexico				
1-4,7-12,14,15	George Willis Jr.	Albuquerque	505-897-4886	505-883-9743
New York				
1,2,4,7,8,10-12,14,15	Bob Beer	Coram	516-928-6870	
3,4,7,8,10,14	David W. Gagnon	Gowanda	716-532-4870	
3,4,7-12,15	Carlos M. Madan	Morrisonville	518-562-0779	518-359-3322
1-15	Larry Merow	Sayville	516-567-0603	516-422-0315
1-5,7-12,14,15	James L. Nicoll	Pittsford	716-381-9480	716-546-6732
8	Frances H. Snedeker	Larchmont	914-834-3081	
1,3,4,6,8,10,12,15	Terry Williamson	Orchard Park	716-662-5104	716-873-9750
North Carolina				
3-5,7-10,12	Marc Apfelstadt	Greensboro	919-282-1494	919-334-5970
Ohio				
1-4,7,8,10-12,14,15	Jason Chao	Cleveland Hts.	216-321-5451	216-844-3791
4,8,14,15	Jason Fogt	Lakeview	513-843-5779	
1-3,7,8,10,11,15	Carman Greco	St. Clairsville	614-695-5026	
1-4,7-11,14,15	Robert J. Netro	Canton	216-477-3667	
Oregon				
1,3,4,7,8,10,12,14,15	Jim Emig	Portland	503-771-1916	503-280-5666
1,4,8	Dave Lomax	Lake Oswego	503-636-7289	
Pennsylvania				
1-3,5-15	Martin Friedman	Broomall	215-353-2753	
15	William D. Hall	Philadelphia	215-824-1160	215-441-0800
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15	Charles R. Schultes Jr.	Lehighton	215-377-5169	215-377-6180
1-15	Bruce Shanker	Warminster	215-674-0118	
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Tennessee				
1-3,7	Bob Evridge	Knoxville	615-693-8817	615-693-9242
6	Joel Goldman	Nashville	615-352-3617	
Texas				
6	Larry Jones	El Paso	915-533-3302	915-565-3016
1-3,7,8,14,15	Joseph Kline	Lubbock	806-796-0829	
Vermont				
3,7,8,14,15	Douglas C. Corey	Middlebury	802-388-6209	802-388-4021
4,8,10,12,15	Linda Metzke	Concord	802-748-3298	802-626-9371
7,8,15	Debby Henning	Sharon	414-736-9229	
Australia				
1-3,6,8,10,11,14,15	Dr. Jules S. Black	Bondi Jctn.	612-327-7501	612-389-8881
Canada				
1,2,7,8,12,15	Nick Van Helsdingen	Tranquility Base	604-296-3260	
1-3,7,8,10-12,14,15	Jean Guy Mariage	Shannon	418-844-2932	418-844-5268
1-3,7,8,12,14,15	Terry Price	Schomberg	416-939-8104	
5,8,10,12	Robert Sutherland	Toronto	416-465-2945	
Mexico				
1-4,6-15	Harve Thorn	Mexico City	525-554-4283	525-516-7568
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Novice Notes • 15 • Comparison of Apple-F and Apple-R • Merritt, Cathleen • data bases; arrange; sorting; record selections

Advanced Techniques • 18 • AppleWorks and the LaserWriter: An Advanced Discussion – Part 3 • Link, John; Williams, Warren • LaserWriter; printing; printing effects

Advanced Techniques • 21 • How to Use an ImageWriter with Enhanced AppleWorks • Link, John; Williams, Warren • LaserWriter; printing; printing effects

AppleWorks GS • 24 • Claris Releases Significant Upgrade to AppleWorks GS • N/A • AppleWorks GS; upgrades; Claris; news

Public Domain Update • 24 • AppleWorks GS Disks in NAUG's Library • N/A • AppleWorks GS; Public Domain

Macro Primer • 25 • How to Debug Your Macros • Munz, Mark • UltraMacros; macros

AppleWorks Applications • 29 • How to Schedule Events with AppleWorks • Smith, Duane • data bases; spreadsheets; clipboard

Members Helping Members • 34 • How to Get Help with Beagle Bros Enhancements • Luoma, Nanette • Special Programs; Beagle Bros; UltraMacros; SuperFonts; TimeOut

New Key Words: AW 3.0 Companion; SpellCopy; DoubleData; FlexiCal; Mr. Invoice; graphics

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Corrections

Please make the following corrections to your back issues:

November 1989; page 30; step 11

Change line 784 to read:
/Palatino-Roman/My-Times-Roman TimesVectors ReEncodeSmall

November 1989; page 23; last complete paragraph

Delete the first two sentences that describe <keyto>. Also delete the word "then" at the beginning of the third sentence.

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